

The Shepherd.

Foot-Rot in Sheep.

It is said that foot-rot, and other diseases to which sheep are subject, occur much less often among flocks which are pastured on rather rough ground, and particularly where they have to climb hills to get their grazing. In Scotland, the great country of Europe, the sheep are always found in greatest numbers among the mountain ranges. The famous Southdowns have also a rough country to pasture on, upon the steep, rugged chalk-hills of the south of England.

A Big Boom in Sheep.

The Texas Wool Grower is credited with saying that "one of the most significant features in connection with the sheep and wool industry in Texas is the fact that many of the 'cattle kings' in this commonwealth are investing in sheep on an extensive scale. These men have made fortunes in cattle, and realizing now that the cream of the profit in this line has been skimmed off, they are going into the sheep with the view of sharing the gains to be obtained in that line during the next five years. 'Straws show which way the wind blows,' and such signs as this indicate that a big boom in sheep is ahead." The Wool Grower expects to see ten pounds high grade merino ewes sell at \$10 per head, and that, too, before we are old enough to have great-grandchildren.

The Care of Sheep.

Hon. A. E. Kinney, at a meeting of the Plainsfield (Vt.) Agricultural Society, said he would recommend the following rules to be observed in the care of sheep:

1. With regard to management never starve a sheep, especially in summer.
2. Do not feed much grain if you have good hay, but at all events never let your sheep grow poor.
3. Many farmers lose by letting their sheep live all winter in autumn without feed as possible; consequently if they are in good condition in October, and lose flesh and are made to gain again, there will be a tender place made in the wool.
4. Have your lambs come in March, if coarse wool; in May, if fine.
5. Shear your sheep, if possible, before May 20th.
6. Keep your sheep from cold storms at all times of the year, and be as careful of them as of your horse. Many sheep perish from showers after shearing, even in July; so, I say, shear at a time of the year when they can be housed for a week after shearing; and in storms in autumn, if the sheep are exposed, it takes a long time to dry the wool, and the sheep are consequently uncomfortable for a long time; colds and consumption are the result.
7. Raise the standard of your flock; weigh every fleece at shearing; number the sheep and note the weight of the fleece, and then sell or kill your poorest sheep, as like produces like, and your average will soon go from four to seven pounds.

But little need be said about raising lambs; only take care of them and be sure especially to know whether the lamb is able to draw the milk. This is one great objection to have lambs come at the pasture, as they do not receive the attention they ought.

Much more might be said with regard to the general management in feeding, salting, curing disease, castrating and docking lambs, but I have said enough, and if any hints I have suggested will prove of use to my brother farmers, I feel that I shall be amply repaid.

[Rules 4 and 5 are, of course, susceptible to modification, according to climate. —ED. RURAL WORLD.]

Cotton Seed Meal.

Mr. E. Sharp, a well-known sheep breeder and wool grower of Texas, writes the following valuable information to the Texas Wool Grower:

"My experience with cotton seed meal as a feed for sheep has been extremely satisfactory. I am most thoroughly convinced that it is not only the best, but decidedly the cheapest feed that can be procured, when properly manipulated. My mode of feeding it is to cut hay or straw, moisten it with water, putting on the meal and mixing it thoroughly. The meal being very adhesive, each of hay, straw or whatever may be used, becomes thoroughly enveloped in a coating of the meal, and will be eaten with a relish by either sheep or cattle. For the purpose of thus preparing it, I have a mixing trough that will hold about 1,000 bushels. I fed my herd of 1,000 ewes last winter entirely upon this feed. I commenced the first of December by giving them (1,000 head) a bulk of cut hay equal to about forty bushels. Upon this I sprinkled 125 pounds of the cotton seed meal—or, two ounces to each sheep. This was their regular feed until the 25th of December, when I increased the meal to 150 pounds—equal to a little less than two and a half ounces per sheep. On the 20th of January I again increased it to 175 pounds, and on the 1st of February to 200 pounds. On the 1st of March I commenced decreasing until I quit feeding—March 20th. Hence the amount of meal fed to each sheep—breeding ewes—was:

Days.	oz.	Total—lbs.
From Dec. 1 to Dec. 25	2 2	3 2
From Dec. 25 to Jan. 25	3 2 4-10	3 12
From Jan. 20 to Feb. 1	10 2 8-10	1 12
From Feb. 1 to March 1	28 3 3-10	5 10
From March 1 to March 20	20 2 1-2	3 2

Making the amount of meal fed each sheep—breeding ewes—was:

This was all my sheep were fed, except when the weather was such as not to admit of their going out. I would then increase the quantity of hay. When kept up all day, or several days at a time, I would, instead of forty bushels, give them 500 to 1,000 bushels of hay, thereby giving to each animal the same bulk of feed each day, whether out on the prairie grazing or kept under cover all day.

The result of this mode of feeding may be briefly stated as follows: Out of 1,000 head I lost, from the 1st of December to the 20th of March, two matured sheep, and on that day I had 95 per cent. of all

lambs born—no abortions, no premature births; mothers gave as much milk as the lambs required, and many of them more than the lamb could take; and today my lambs are the largest and my ewes the fattest—in fact, my flock is in the best condition I ever saw a flock of its size.

I put up my hay and corn, and can only approximate the cost. I bought my meal early in the season, at a reduced price, so that it just cost me \$20 a ton at my ranch. Hence, it cost me to winter my sheep just 17 6-10 cents per head for meal, and I think about 7 4-10 cents for hay, making a total cost of 25 cents per head; but, at \$24 per ton, it would increase the cost of wintering to 28 1-2 cents. Last winter a year ago I fed my sheep on corn, cotton seed, bran and hay, and it cost me about 63 cents per head, or two and one-half times as much as it did last winter; and yet they were not half as well fed.

I will take pleasure in explaining in detail several experiments I have made in feeding cotton seed meal dry, both to cattle and sheep, all of which satisfy me that, for producing milk, fat or forming flesh, cotton seed meal has no equal.

E. SHARP.

Meridian, Bosque Co., Texas.

Difference in Wools.

I feel somewhat like quarreling with the idea that so many have in supposing that a black gummy sheep is a sure indication of its fineness. The idea comes more forcibly to my mind in consequence of hearing so many at our late fair express their minds in that direction. One would suppose that a few ounces of the article that is sure to bring a discount when we sell our wool suddenly becomes valuable when looking at the sheep. Even awarding committees very generally are guilty of this weakness, and you are very sure of seeing the flutter of a red ribbon in their wake, lodged near the abiding place of the blackest sheep on the ground. I have taken some pains to ascertain some of the reasons why their preference is given in that direction, and almost invariably the reason given is that an oily, gummy buck is so much better to cross on the common ewes of the country. Others claim that after using a gummy buck and getting their sheep graded up to the proper standard, they intend to breed for longer wool. Far better would it be to try by breeding to retain every particle of length that is possible, and grade to the required fineness, than to breed back and be obliged to go over the very same ground twice. It is much easier to retrograde in quality of wool than to advance. Short wool and coarse wool are easily produced, in fact they produce themselves if we but slacken our diligence one particle; try as best we may, some fleeces will be objectionable, and we are constantly obliged to keep turning off and weeding out in order to keep our flocks up to the proper standard. This system of keeping inferior animals when good ones could be equally well kept, and of course with better profit, is very reprehensible; especially so when we remember the many facilities for getting good ewes, and rams. To possess a fairly good stock of ewes and a ram of good dimensions and wool, and of no chance breeding, is to have the first thing needed. But this in itself will not be sufficient if the necessary amount of forethought, energy and intelligence is not forthcoming, and it is often owing to the want of these latter qualifications that so many failures occur.

It seems strange that a majority of farmers, after attending a fair and seeing first-class animals of the different breeds, can return home and again pursue the same old process of breeding without one thought of improvement put into successful practice. It seems that the old ruts in which our forefathers traveled have become so habitual to us that we are prone to follow on in the old way until some sudden jar produces an entire revolution in our plans and then we are so thoroughly Americanized that we cannot make a gradual change like our more phlegmatic neighbors across the water, but make a pell-mell drive with mayhap both our eyes shut, and no guarantee of a safe landing. —[Cor. Ohio Farmer.]

Information Wanted.

COL. N. J. COLMAN: I am much in need of information on a number of matters, and hope through the columns of your valuable paper to get it. I wrote to R. M. Bell last August for the same, but he never answered my letter.

1st.—When is the proper time to castrate lambs, and also old rams?

2d.—Is cotton seed good for sheep?

3d.—Is the grass of the Western prairies, commonly called sage grass, good hay for sheep?

4th.—What do you think of sulphur mixed with tobacco as a sheep dip?

5th.—What can I do for the scab at this time? It seems too cold to dip.

6th.—What is your opinion of shearing in this climate (same as the north line of Texas) once or twice a year?

7th.—Can you recommend Mr. Gentry's sheep as being pure blood merinos?

8th.—If I purchase a sheep from him, what is reasonable for the sheep, as he is to be shipped to me?

9th.—About what will 120 Southwestern muttons bring in your market, after getting fat on grass in the spring, say in May or June?

I am like a man I once knew in Texas. If all my sheep were to lay down and die, if I had the money and could find the sheep, I would invest again the next day.

I have some Arkansas sheep, but they don't stand hardship like the merinos. I am a subscriber for your much-prized and valuable paper, and expect to continue such as long as I grow stock.

Please give me the desired information in an early number, and oblige.

J. J. S.

Oakland, Indian Territory.

ANSWER.—1st.—The best time to castrate lambs is when they are about a week old; rams may be castrated or corded (which is better) any time when the weather is favorable. Extremes of heat and cold are to be avoided. 2d.—Cotton seed meal is good for sheep; see article in this week's RURAL WORLD Sheep Department on that subject. 3d.—We doubt its being a good grass for sheep, but would like to hear from some of our correspondents on the plains on that question. 4th.—Used in proper proportions, it is probably a good combination. 5th.—Unless you have good shelter, you had better defer dipping until warmer weather; the proper time for dipping is immediately after shearing, when it should be persevered in until the

insect that produces the scab is entirely destroyed. No half-way measures will cure the sheep. 6th.—We prefer to have sheep breeders answer this question. 7th.—Mr. Gentry is entirely reliable, and any sheep that he recommends or sells as pure blood merinos will be surely such. 8th.—We believe that Mr. Gentry will not ask more than a fair and reasonable price, taking blood and quality into consideration, for his sheep. 9th.—That depends entirely on the supply and demand. Our market report will show from week to week the prices such stock commands at the stock yards.

THE WOOL MARKET.

Present and Prospective.

Under date of Boston, December 30th, we have the following report respecting the wool market:

The week and the year close with a better feeling in the wool market than has been noticed since the agitation of the tariff question began. The blunders of the commission have been thoroughly exposed and ventilated, and as they involve such gross perversion of the intent of the people, as well as of the commission itself, it is generally conceded that Congress will make the proper amendments. This faith has helped to restore confidence, though, until definite action is taken at Washington, the present uncertainty as to the schedule of duties finally to be adopted will continue to be a disturbing element. The decline in prices continues to attract buyers, and, considering that we are in the height of the holiday season, we regard the sales of two million three hundred and fifteen thousand pounds of domestic wool during the week as a hopeful indication for the future. We do not ignore the fact that some conservative dealers and buyers look for a further decline, and freely predict a 37 to 38c market for fine Ohio, and 35c market for the Michigan fleece.

The judgment of some of these gentlemen is entitled to respect, but in the present case we are obliged to differ from them. We believe prices have touched bottom, and in the absence of any unusual event, we expect to see our present quotations fully sustained hereafter. We are not predicting an advance, but we want such buyers as are looking for further important concessions that they may be disappointed; and in their interest, as well as that of owners of wool, we hope they will be.

WEEK CLOSING JANUARY 6TH.

The new year opens with a better feeling in the wool market than has been noted for several months. We are not able to report any advance in prices, but they are less irregular under an improved demand. We repeat our views as stated by us last week, when we said, "We believe prices have touched bottom, and in the absence of any unusual event, we expect to see our present quotations fully sustained hereafter."

Sales reported by Advertiser: Domestic, 2,702,000 pounds; foreign, 40,000 pounds.

Sales reported by Journal: Domestic, 2,854,500 pounds; foreign, 40,000 pounds. An analysis of the latter shows the sales to consist of 1,275,700 pounds of washed; 1,098,700 pounds of unwashed; 80,400 pounds of scoured; 399,700 pounds of pulled and noils; 10,000 pounds of cape, and 30,000 pounds of carpet wool.

Foot Rot in Sheep.

An eminent English authority recommends the following treatment for foot rot in sheep: The earliest appearance of lameness should be followed by an immediate examination of the feet. All dirt, foreign bodies and detached horn should be carefully removed—carefully, so far as the latter is concerned, because I am of opinion there is entirely too much indiscriminate use of the knife practiced, diseased and sound horn alike being often randomly removed. Having pared away all detached horn, the exposed parts are to be dressed with a suitable agent. These which have been found to be: Sulphate of copper, nitrate of silver, creosote and tar. My own application, which I have always found to answer, is composed as follows: Nitric acid, compound tincture of Myrrh—of each one ounce; crude carbolic acid, one-half ounce; to be well mixed and applied with a feather. Where the horn is soft and spongy and the discharge acid, Finlay Dun recommends as a useful dressing an ounce each of creosote, turpentine and linseed oil, and in the absence of the first two ingredients (creosote has similar action to carbolic acid) in the formula I have given it will be found exceedingly beneficial. The same authority further advises, when the interdigital skin becomes involved, the dusting of it daily with powdered oxide of zinc or sulphate of copper, or the gentle application of nitrate of silver, a line of treatment which I also fully agree. When the bones, tendons, ligaments and joints become involved, treatment applicable to these conditions must be adopted on surgical principles. In such cases, Fleming observes: "It may be necessary to remove the whole of the hoof; and where there is necrosis, caries and ulceration of the joints, which do not yield to any of the measures adopted, amputation of the affected phalanges may be resorted to, and with success when only one foot is involved. A valuable ram or ewe may in this way be saved, and its aptitude for breeding purposes be but little impaired. The end of the limb, after the amputation, is covered with a thick cicatrizing of a honey nature, and it is only exceptionally that it meets the ground; the animal traveling short distances and grazing very well on three legs. Collateral treatment consists in avoiding, so far as possible, all conditions influencing the production or continuance of the disease. The affected animals should be removed to clean, dry ground. When practicable it is advisable after the dressing to place the patients in a building and on clean litter. In cases where there is extreme constitutional disturbance, salines and mineral tonics may be given with advantage; but, speaking generally, internal remedies are not required. After recovery and removal of the sheep, lime should be plentifully strewn over the ground of the fold. In neglected cases, where the disease has become chronic and eventually recovery has taken place, anchylosed and enlarged joints, and deformities of the feet, are often the result. In such instances it is better to prepare the animal as speedily as possible for the butcher."

The ignorant call him a heretic whom they cannot refute. —[Campanella.]

The Pig Pen.

Raising Family Pork on a Small Farm.

For the benefit of "small" farmers who read the RURAL, I here give my method of raising pork for family use: In the first place, I have a tight floor in my barn, and when feeding my stock I shake the dust out of the hay as well as the seeds and clover leaves and blossoms, sweeping them all up once a day to prevent them being soiled by unclean boots when I am feeding the stock. When gathered I put them in a tub or pork half-barrel in the yard near the kitchen door, and as the cooking stove has fire in it all day now, I can always get a kettle of hot water to pour over the stuff, which is at once covered. I fed three pigs from October, 1881, till September 1, in the following way: I fill a patent pail with hay seed, leaves and clover blossoms; with this stuff I mix three pounds of wheat middlings three times a day for my three pigs, giving them a pailful of water each time. If there is no slop in the slop barrels. This feed will winter three pigs in good order, and if they get good slops from the house and have a warm pen to sleep in, they will generally be too fat for breeding purposes. In summer I let them run on grass, but they are fed the usual amount of middlings and have the customary quantity of water or slop to drink. In September I feed green sweet corn, and in October I give them shelled corn, and the middlings as usual. Here is my pig account for one year:

Dr.	
October 1, 1881, to 3 young pigs, at 83.....	\$ 9 00
To 11 months' feeding wheat middlings, at 81 25 per 100 pounds.....	29 70
Sweet corn in September.....	12 00
600 pounds of middlings in October 7 50	
12 bushels of shelled corn, at 85c.....	10 20
Total.....	\$68 40
Cr.	
July 5, 1882, sold 4 pigs at \$25.00.....	\$100 00
September 20, sold 3 pigs at.....	5 00
at 85 00.....	15 00
November 10, sold 675 pounds of pork, at 10c.....	67 50
Total.....	\$97 50
Net profit.....	\$29 10

Hereabouts the manure is the only pay allowed farmers for keeping hogs, and so far as the amount and quality of the manure are concerned, I get as good pay as any of my neighbors and the \$25 10 for the refuse from my barn. Had I separated my sows in time last spring I would probably have four more pigs to sell. As it was, they were dropped out of doors during a cold night, and as there were two sows on the place, the young things were found dead in the morning.

The Poultry Yard.

Periods of Incubation.

The period of incubation or time required in which birds sit on their eggs before the young are hatched varies in different species, as follows:

Humming bird, 12 days; canary bird, 14 to 18 days; pigeon, 14; common fowl, 20 to 22; turkey, 28 to 30; guinea fowl, 28 to 29; duck, 28 to 30; pea fowl, 28; goose, 35; swan, 40 to 45; parrot, 40. The authorities vary some as to the temperature necessary for the development of the young bird—some put it at 104 degrees, others at 140 degrees Fahr. The chick of the common fowl on the fourth day of incubation attains the length of about one-third of an inch; and then what appear to be voluntary motions are first observed. Ossification, or the process of forming bone, commences on the ninth day. Feathers appear on the fourteenth day, and if taken out of the shell the chick can open its mouth; and about the nineteenth day, the air-vessel at the large extremity of the egg is ruptured and breathing begins.

Try Poultry Raising on the Farm Again.

The ever genial and clever Phil. Thrift, too modest to use his own good name, thus discourses on this subject in the Western Rural:

The investigations regarding the cause and nature of chicken cholera, made by the Department of Agriculture at Washington, have not been without good results. From experiments made it has been found that the germs of this disease are taken into the body with the food and drink and seldom if ever with the air inspired; that the ground on which diseased fowls are kept becomes infected with the virus from the excrements of the fowls; also that a one-half per cent. solution of sulphuric acid will destroy the germs. These are not the only facts brought out by these investigations, but they are enough, if intelligently acted upon, to make poultry raising a much safer business than it has been of late years.

If their highest happiness is to "scratch," and it is thought best that they be indulged in this, turn them into the field, or even the vegetable or flower garden, where they can have fresh ground in which to amuse themselves; but never have them range and scratch and eat on the same ground.

The almost universal practice is to throw the food for poultry on the ground. In this way the fowls take up more or less dirt, and with it, if present, the germs of disease. As a preventive of the introduction or spread of the disease in this way, the fowls should always have their food and water supplied them from clean vessels. Even dry grain, as corn or wheat, should be given them in small boxes or troughs, from which they can pick the feed but cannot tramp it with their soiled feet.

The other point of interest and to be remembered is that should the disease make its appearance it may be checked and finally banished by the use of sulphuric acid. The floor of the poultry house, after being cleaned, should be well showered with the solution from the rose of a watering can, and the yard, so far as practicable, treated in the same way. Sulphate of iron (copperas) is also a deadly poison to these germs, and is safer to handle than the sulphuric acid. One pint of dry copperas

dissolved in two gallons of water will be found strong enough, and I am not sure but a solution of less strength would answer as well.

It is remarkable that eggs should be selling at this time of the year, in Central Illinois, at thirty cents per dozen, and young chickens at thirty-five to forty-five cents each. Such prices indicate the scarcity of poultry and eggs, and this in turn shows to what an extent discouragement in this line of industry has reached.

With the better knowledge now had of this malady known as chicken cholera, there seems to be no reason why the rearing of poultry should not again become a profitable business, even at prices far below those above mentioned. Poultry products on the farm should be more abundant, and could be, without doubt, were the extra care in management above indicated more generally practiced.

Of the many thousands of poultry keepers in the country only a few have hens that lay in winter. This if not a fault, is at least a misfortune. Eggs are nice to have in cold weather either to sell or to keep, but especially to sell. There is no difficulty about it if you go at it right. Treat the hens decently, give them comfortable quarters, and feed them well and they will lay. If it should happen that under fair treatment they refuse to respond, they are a bad lot, and need to be suppressed and their places taken by a more appreciative set.

When turkeys are not two months old they can successfully withstand the severest weather if dry. In wet weather they should be confined in a yard under cover.

Fifty fowls will make, in their roosting house alone, from 7 cwt. to 10 cwt. per annum of dry manure and poultry manure is richer than guano in ammonia and fertilizing salts. No other stock will give an equal return in this way.

If you want the hens to attend strictly to business in the way of egg-production give them a chance. Warm breakfasts, clean water, broken oyster shells, some sheep oats or wheat, some thick milk into which good bran is stirred, some cabbage or other green stuff, comfortable, home-like roosting and laying apartments, a square meal of whole corn in the evening—and then see if they are not industrious and diligent in business.

ADVERTISEMENTS.

No Whiskey!

BROWN'S IRON BITTERS is one of the very few tonic medicines that are not composed mostly of alcohol or whiskey, thus becoming a fruitful source of intemperance by promoting a desire for rum.

BROWN'S IRON BITTERS is guaranteed to be a non-intoxicating stimulant, and it will, in nearly every case, take the place of all liquor, and at the same time absolutely kill the desire for whiskey and other intoxicating beverages.

Rev. G. W. RICE, editor of the American Christian Review, says of Brown's Iron Bitters:

Cin., O., Nov. 16, 1881.
Gent.—The foolish wasting of vital force in business, pleasure, and vicious indulgence of our people, makes your preparation a necessity; and if applied, will save hundreds who resort to saloons for temporary recuperation.

BROWN'S IRON BITTERS has been thoroughly tested for dyspepsia, indigestion, biliousness, weakness, debility, overwork, rheumatism, neuralgia, consumption, liver complaints, kidney troubles, &c., and it never fails to render speedy and permanent relief.

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HAIR RENEWER

was the first preparation perfectly adapted to cure diseases of the scalp, and the first successful restorer of faded or gray hair to its natural color, growth, and youthful beauty. It has had many imitations, but none have so fully met all the requirements needed for the proper treatment of the hair and scalp. **HALL'S HAIR RENEWER** has steadily grown in favor, and spread its fame and usefulness to every quarter of the globe. Its unparalleled success can be attributed to but one cause: *the entire fulfillment of its promises.*

The use for a short time of **HALL'S HAIR RENEWER** wonderfully changes and improves the personal appearance. It cleanses the scalp from all impurities, cures all humors, fever, and dryness, and thus prevents baldness. It stimulates the weakened glands, and enables them to push forward a new and vigorous growth. The effects of this article are not transient, like those of alcoholic preparations, but remain a long time, which makes its use a matter of economy.

Buckingham's Dye

FOR THE WEATHERERS.

Will change the beard to a natural brown, or black, as desired. It produces a permanent color, and does not wash off. A single application, if it is applied without trouble.

PREPARED BY R. P. HALL & CO., Nashua, N. H. Sold by all Dealers in Medicines.

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FOR THE PERMANENT CURE OF
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No other disease is so prevalent in this country as Constipation, and no remedy has ever equalled the celebrated **KIDNEY-WORT** as a cure. Whatever the cause, however obstinate this remedy will overcome it.
PILES. This distressing complaint with constant pain, and which weakens the weakened parts and quickly cures all kinds of Piles even when physicians and medicine have failed.
— IF YOU HAVE EITHER OF THESE TROUBLES —
PRICE \$1. USE DRUGGISTS SELL
KIDNEY-WORT

AN OFFER TO FARMERS.

I have invented a Self-supporting Board Fence; needs no posts, can be made in the barn on rainy days; costs 30 cts. a rod less than post and board fence. It is not patented but for 30 cents I will send illustrated Fence Treatise, telling how to make it, and one of the following premiums: 1st, a one-foot book-wood, pocket rule. 2d, Kendall's Horse Book, 100 pages, 33 illustrations. 3d, one package of Sugar Trough Guards, Acme Tonsils, Prize Head Lettuce, Verbena and Phlox, or all the above for 60 cts. Address, **WALDO F. BROWN**, Box 75, Oxford, Ohio.

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Are now used by thousands all over the country with the greatest satisfaction. They wear longer and ride easier, and bear a greater and more sudden strain and are especially adapted to the country, as well as city roads, than any other. They are manufactured by all carriage builders. Address, **HENRY TIMKIN**, Patented, St. Louis, Mo.

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FARM MILLS
For Stock Feed or Meal for
10,000 in use
Write for Pamphlet
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"ACME" Pulverizing Harrow.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and to the Cutting, Lifting, Turning process of double rows of STEEL COLLETERS, the peculiar shape and arrangement of which give immense cutting power. Thus the three operations of crushing lumps, leveling off the ground, and thoroughly pulverizing the soil are performed at one time. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to the inverted sod and hard clay, where other Harrows utterly fail, works perfectly on light soil, and is the only Harrow for Cultivator that cuts over the entire surface of the field, leaving the field.

Highly commended by scientific and practical Farmers, many of whom pronounce it to be the most valuable recent improvement in farm Machinery, while the "ACME" is the only one that "prepares the soil, before planting, will increase the yield from Five to Ten Dollars per Acre."

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If your dealer does not keep the "ACME" for sale, don't let him pull you off an inferior tool on you by assuring you that he has something better, but SATISFY YOURSELF by ordering one ON TRIAL. We will send it on trial, and if it does not suit, you may send it back, paying no freight charges. We do not ask for money or Note until after you have tried it on your own farm. Send for Pamphlet containing Illustrated Testimonials from 44 different States and Territories. **NASH & BROTHER,** Manufacturers and Principal Office, Branch Office, **MILLINGTON, New Jersey.** N. B.—Pamphlet entitled "TILLAGE IS MANURE" will also be sent to parties who name this paper.

THOMAS Smoothing Harrow.

—It carried on the—

HIGHEST PREMIUM

Over all competitors at the great Centennial exhibition. The best harrow for pulverizing the ground. The best harrow for preparing the soil for grass or other seeds. The best harrow for covering seed. The best harrow for cultivating winter wheat in the spring, adding largely to the yield. The best harrow for cultivating young corn, sorghum or potatoes, as it thoroughly destroys the weeds and does not tear out the plants. The teeth being made of solid steel are slanting backwards, and thus never clogging. Do not tear up corn, cane or potato plants, but destroys all light-rooted weeds. Every farmer should have it. Send for illustrated circular to the nearest agent, or the southwestern agent, **CHAS. E. PRUNTY,** Dealer in Grain and Grass Seeds, No. 7 North Main St., St. Louis, Mo.

Fishing Nets,

—AND—

FISHING TACKLE.

Horticultural.

MISSOURI HORTICULTURAL SOCIETY.

The Twenty-sixth Annual Meeting of the Missouri Horticultural Society was held in the Merchants' Exchange rooms, in Kansas City, on December 19-22.

The exhibits of fruits were unusually fine, the papers and discussions very interesting, and, taken altogether, this was one of the best meetings the Society has had for some years.

Mr. Hopkins read a paper on Strawberries, in which he stated the good points of an ideal variety to be: 1st—hardiness; 2d—productiveness; 3d—size; 4th—quality. He said that the model variety had not been discovered, but that of many varieties that he had grown he preferred the following, and in the order named, viz: Chas. Downing, Miner's Prolific, Windsor Chief.

Mr. Underwood and others discussed the sweet potato question at some length, the general experience being that with careful handling so as to avoid all bruising, there was very little trouble in wintering the potatoes in any ordinary cellar.

Mr. P. M. Kiely, of St. Louis, gave the following as a list of peaches which he had found most profitable as market sorts for the St. Louis market, for Missouri farmers: Alexander, Early Rivers, Crawford's early, Crawford's late, Foster, Ward's late, Old Mixon Free, Newington Cling, Morris' White, September Queen, La Grange, Nanticoke, Heath, Steadley, Geary's Hold-on.

Several members thought that Smock should be added.

F. S. Earle, of Cobden, Ill., read an exceedingly interesting paper on "Parasitic Fungi." Engravings of the illustrations used are now being prepared, and as soon as they are completed we shall publish the paper in full in the RURAL WORLD.

Mr. Holsinger gave an excellent talk on the urgent necessity of fruit-growers giving more attention to the prevention of insect ravages, believing prevention better than cure.

Mr. Slichter, of Kansas, read a paper on Forestry, in which he took a very rosy view of the immense profits of tree-growing in Kansas, and was followed by Hon. F. P. Baker, United States Commissioner, who lamented the growing scarcity of timber throughout the West, and urged the establishment of government forests and forest schools.

The exhibition of fruit was remarkably fine, nearly every specimen on the tables being free from any blemish. At the close of the meeting a committee was appointed to make an exhibit of fruits at the Mississippi Valley Horticultural Society at New Orleans, in February next.

Prof. Tracy, of the Agricultural College, reported that during the past year he had planted for the Society 58 varieties of apples, 17 of peaches, 42 of pears, 5 of cherries, 2 of quinces, 12 of raspberries, 1 of blackberries, 38 of strawberries and 74 of grapes. He had also planted a large assortment of vegetables, and had 119 varieties of potatoes on exhibition during the meeting.

Officers for the next year were elected, as follows:

President, S. M. Tracy, of Columbia; Vice-President, C. M. Stark, of Louisiana; Secretary, L. A. Goodman, of Kansas City; Treasurer, J. C. Evans, of Harlem; Vice-President of Mississippi Valley Horticultural Society, Norman J. Colman, of St. Louis.

Carriage was fixed upon as the place for the next annual meeting, and the question of a semi-annual meeting was referred to the Executive Committee.

Grape Culture.

BY G. F. ESPELBAUGH.

Another year's experience has taught us once more where to plant grapes. It has also proved again in what varieties the most money is made. The late frosts in spring reached the vineyards on low lands, as well as only partially low. Only the highest hillsides and ridges escaped the frosts altogether.

Those highest hillsides are also more free from rot and mildew than the lower locations. Distance of planting, too, has a good deal to do with success or failure, 7 by 9 feet; or 6 by 10 feet, apart is none too much for strong growing varieties. Low training on the trellises, is productive of rot and mildew, as it prevents circulation of air, near the earth's surface, which is very essential during rainy or cloudy weather.

Now as to the varieties. A number of new kinds are before the public for trial, some of which may prove great acquisitions to our grape list. Among the earliest new varieties is the Early Victor, a native of Kansas, of Concord origin and comes highly recommended. Telegraph, not a new variety, but not planted near as much as it should be, is large in bunch and berry, very compact, hangs well to the bunch until quite late, and of fair quality, a very hardy vine.

The old Delaware I consider one of the most deserving of American grapes if properly treated. Its requirements are: good lively warm and dry soil, it must have good cultivation, especially during a dry season, and, above all, it must be pruned short. As it is apt to overbear with long pruning, it is best to plant it about 5 by 5 feet, and train it to stakes and

cultivate both ways. Under this treatment it is one of the, if not the, safest to plant. It is one of those few varieties that is never affected by rot, and its excellent quality will always insure for it the highest market price. It has one more point in its favor; it will endure more handling than any other grape we have, its tough skin, small berries and compact bunch, is just what is needed in a grape to come out bright after it has been shipped a long distance, or has been held by the dealer for several days, or a week. I have seen plants of it, and two fair ones of one week's duration each, and at the end it looked the brightest of some of the best varieties. Much is promised us of a seedling of the good old variety, the Beauty. It is said to be much larger in bunch and berry, also a stronger grower than its parent.

A number of good seedlings have been produced here in the West from the Taylor. The Elvira is one of the oldest, very productive, and hardy, but its tender skin will ever keep it from becoming a profitable market grape. Missouri Riesling, Grün's Golden, and a few other Taylor seedlings produced by Mr. Grün are highly promising. It is indeed from American sorts that we must expect to raise seedlings which will be equal in quality for the table and wine to the best European grapes, and the Taylor, as worthless as it is, may yet become one of the great-grand-parents of some of our best American grapes.

The Concord is yet, and will be for some time to come, the grape for the million, but the desire for something better in quality, with the vigor of this fine grape, has induced many to produce seedlings therefrom. Thus we have the Triumphant, Lady, Worden, Early Victor, Moore's Early, Pocklington and others, nearly all hardy and vigorous as well as productive. The Concord is also one of the parents of some very valuable hybrids, of these few have: Lady Washington, Eldorado, Jefferson, Niagara and Highland.

Of the latest varieties the Norton and Cynthiana are some of the best black varieties, and Goethe the best of all the late for table and wine.

The above essay was read at the late meeting of the Missouri Horticultural Society.

How Far Apart to Plant Fruit Trees.

This subject is creating some discussion in Southern Illinois. Our practice has been to plant 20 feet apart, and after 30 years experience we would not plant closer. A writer in the *Farmer and Fruit Grower* says that he has found by talking with peach growers in his vicinity that it is pretty generally conceded that 20 feet is near enough, and close planting is not profitable; not a few of the most successful advocate 22 feet on good, strong ground. The peach growers on the Lower Hudson, Jersey, Delaware and Maryland plant close, we admit, and are in a measure successful, but we cannot attribute their success to their mode of planting, but rather to their climatic influences, thorough cultivation and manner of pruning. They do not have a large growth in orchard or nursery as we do. Not a few of the Eastern growers contend that by giving the trees more room, they raise better peaches and of course obtain better prices, especially in seasons of protracted drouth. This also is the experience of most all the Western growers that have written on this subject, some of them men of 25 years experience in the West, who are fully as capable of forming an opinion as A. M. Purdy. After observing closely the successes and failures of orchards of this kind for 22 years, I cannot say one word in favor of close planting, although engaged in raising and selling trees. I have seen more than one crop of peaches on the prairies, when a drouth has visited us in August, shriveled and nearly worthless, planted 14 to 15 feet distant; at the same time, from trees 18 to 20 feet distant, of the same varieties, some kind of soil, peaches were better matured, better colored, and would pack 40 to 50 peaches to a three-bushel box.

A few years ago, spring of 1880, I had planted 20 acres to peaches on a prairie, deep yellowish soil, a northwest exposure and western slope. I then consulted several of the oldest and most successful peach growers in the counties of Clinton and Marion in regard to the best distance. No one advised planting nearer than 20 feet, and two or three advised on good ground to plant 22 to 24 feet, and all admitted close planting was a mistake. This was in accordance with my own experience and observation. I therefore settled upon 22 feet as a good distance, and do not regret planting at that distance. I am now satisfied in my own mind that close planting will produce on our prairie soil long stag horned bean pole branches in spite of all the cultivating and heading back. The tendency is to draw them up toward the sunlight, and wider planting has a tendency toward spreading them out. Having a large space to draw their supplies from, a better opportunity is offered to head low and let in sunlight and air. They are then affected less with drouth, and it is more convenient to get around with a wagon, to gather up fruit and take out brush. Close planting may do well enough on poor, barren hills, where ground is inclined to wash away, but for the large staple market, peach that ripens in August and September, room for sunlight and air is necessary to success. I have seen this demonstrated the past season. The same fact holds good with apples. Too many trees are often crowded on the ground. The first three weeks of dry weather the starved trees show signs of shriveled, half-cooked fruit, which soon fall prematurely to the ground. We need a revival among fruit growers. Too many engaged in it have no love for fruit, but for the few dollars and cents they can get out of it. We need men to engage in it that have brains and are willing to use them, and co-operate to fight weeds, root aphids, codling moth, borers and the multitude of enemies that beset us. Of what use is it for me to fight weeds, insects, etc., if my neighbors on all sides of me neglect the whole thing and are content to raise and ship poor and worthless fruit? There is more need than ever before for men with heads, not empty heads, nor pumpkin heads, but heads full of determination and practical knowledge, and who are unselfish enough to be willing to impart to others. We need men of this kind in the orchard, garden and nursery to help to do our work. But how is it? Not one in 25 that we can hire will take any interest in our work only to get our money.

Pruning Evergreens.

A moderate pruning or shortening back may be given late in summer after the terminal buds have formed, the pruned branches thickening and becoming hardened by slight growth. If done much later, the trees will be rendered somewhat tender and not endure winter so well. Heavy pruning, when required, is performed to best advantage in spring, just as growth is commencing. Any time in the growing season the shoots may be pinched back for securing a compact and symmetrical form. These rules apply to hardy, free-growing evergreens.

Fence Posts that Will Last.

A writer in an exchange says: I discovered many years ago that wood could be made to last longer than iron in the ground, but thought the process so simple that it was not well to make a stir about it. I would as soon have poplar, basswood or ash as any other kind of timber for fence posts. I have taken out basswood posts after having been set seven years that were as sound when taken out as when first put in the ground. Time and weather seemed to have no effect on them. The posts can be prepared for less than two cents a piece. This is the recipe: Take boiled linseed oil and stir in pulverized coal to the consistency of paint. Put a coat of this over the timber, and there is not a man that will live to see it rot.

Whitewash and Linewash.

Before you whitewash a wall, wash it well with a brush and clean water. To make whitewash, put some whiting into a basin, pour water on it, mixed them up well, till the whiting has all sunk to the bottom, and then pour the water away. Repeat this two or three times, if you want your whitewash to be a good color, and not to have a dirty yellow tinge when on the wall. Then mix the cleaned whiting with water into a milk-like fluid, and add a little melted size or dissolved glue, also a small quantity of "powder blue." The more size you add the less will the whitewash when dry "rub off" on the clothes. The blue is added to correct the yellow tinge. To make linewash put some freshly-burned quicklime into a pail; pour on enough water to cover it; add at once a pint of boiled linseed oil to each gallon of the wash; and then add more water until the mixture is thin enough to use. In putting on either whitewash or linewash always draw your broad, flat brush in the same direction, that is, if at starting you move it from east to west, do not afterward move it from north to south or from top to bottom.

Root Pruning.

The experiments were made on the apple and pear. A vigorous apple tree, eight or ten years old, which had scarcely when about half the roots were cut in one season and half three years later, by going half way round on opposite sides in one year and finishing at the next pruning, working two feet underneath to sever downward roots. It has always answered well also to cut down such trees all the larger and longer roots about two and a half feet from the stem, leaving the smaller and weaker ones longer and going half way round, as already stated. The operation was repeated three or four years later by extending the cut circle a foot or two further away from the tree. By this operation unproductive fruit trees become thickly studded with fruit spurs, and afterward bore profusely. The shortening of the roots has been continued in these experiments for twenty years, and the results are, the circle of roots remaining greatly circumscribed. The best time for the work has been found to be in the latter part of August and beginning of September, when growth has nearly ceased and while the leaves are yet on the trees. [London Garden.

Adulteration of French Wines.

Of more than 3,000 samples of wine analyzed at the Paris Municipal Laboratory during the last ten months, only between 300 and 400, or about one-tenth of the whole, were found to be of good quality. The rest were pronounced either passable or bad, without, however, for the most part, containing any poisonous ingredients, but some 300 or 400 revealed on analysis the presence of deleterious and noxious substances, such as sugar of lead, alum and sulphuric acid. Beer seems a safer beverage; for though glucose obtained from the potato entered largely into the composition of many of the specimens examined, this in itself is not injurious to the health; while hops, absent in most cases, were innocuously replaced by quassia and similar barks.

The result of the analysis of the samples of cognac recalls the famous dictum of the Italian inn-keeper, that wine can be made from anything—even from grapes; for, owing to the ravages of the phylloxera in recent years in the charente district, and the high price which wine commands, all the so-called cognac since 1878 has been made from spirit distilled from grain, beet, root or molasses. One-half of the brandy tested at the laboratory was declared bad—not in the sense of being spurious, that is of course, but of being made from insufficiently rectified spirit produced from some substitute for grapes. [St. James Gazette.

Notes Upon Grafting.

The time was when few persons understood about grafting trees, and was rather a mysterious art and generally some person in each neighborhood did all the grafting that was required. But since the agricultural journals began to illustrate with pen and pencil the practical operations of horticulture, every farmer's son can, if he will, change the tops of an old orchard or start a new one, as he chooses. Each year, however, there are some who wish to practice this ancient art, to whom notes upon the methods used are timely and valuable. The proper season for grafting is in the spring, when the sap is beginning to circulate; and there are many kinds of grafting in vogue, all, however, agreeing in essential particulars. The requisite is that the inner bark of the scion shall exactly unite with the inner bark of the stock, and they should be kept in close contact till the union is complete. In some ways grafting is more troublesome than budding, but it gives a quicker start. For nursery stock it is usually advantageous to use budding wherever practicable, but grafting is preferred for orchard work.

On small trees where stock and scion are of nearly the same size, whip or tongue grafting is usually the method preferred. Scion and stock are cut obliquely and at the same angle. Next, a narrow slit is to be made, nearly in the

center of the sloped face of the stock, downward, and another in the slope of the scion upward; this, if carefully done, leaves a tongue-like strip on each face, and they are to be slipped together, so that the smooth face of the scion touches that of the stock and both are bound together by the cuts made. Tie with strips of cloth covered with melted tallow and beeswax. Every part of the cut surface when exposed to the air and light must be covered with these cloth strips, which are pressed and an impervious covering made. There is a modification of this system of grafting in which, if the stock is much larger than the scion, the cut in the stock is made of only the width of the scion.

Another variation of this system consists in side-grafting, which is performed on the side of a stock without cutting the entire head off. If a valuable tree has lost a branch from any accident, a side-graft put in will soon supply the deficiency. This is of particular advantage in the case of ornamental trees on a lawn, where a branch blown off by the wind often spoils the looks of a tree unless some speedy method of restoration is adopted. In such a case you are to select the spot where you wish the new branch to start from, pare off the bark and a little wood, cut the scion to fit, and wrap closely.

Truck Gardening.

The advantages to be derived from the cultivation of early vegetables and fruits are just beginning to be appreciated by the South. Louisiana, we are sorry to say, has not profited by these crops as fully as her sisters, Tangipahoa. It is true, has been shipping some early fruit North, and the river parishes have made some money in potatoes and onions; but we have not yet made as much out of our rich soil and soft climate in this respect as we might.

Virginia, the two Carolinas and Florida have, so far, profited most by this new industry. This cultivation of early vegetables in the South has resulted in a complete change in the Northern markets, and the seasons for vegetables and fruit there have greatly altered. Strawberries formerly came in June in New York, and tomatoes about July. Tomatoes to-day appear on the streets of that metropolis in February, coming from Bermuda; Florida tomatoes soon follow; then Georgia, and so on northward, until the New Jersey and Long Island crops are finally reached.

Of the wonderful profits of truck farming in the South much has been said, but volumes yet remain untold. A strawberry farm near Charleston has been found to yield a better harvest than a cotton plantation, and a Georgia farmer now makes a fine living from a lot of asparagus.

This truck farming experiment is being supplemented in Tennessee by fruit drying—a brand new industry. Chattanooga, Tenn., which two years ago did not ship a pound of dried fruit, has already shipped 720,000 pounds this year, and this new industry being found very profitable, is, of course, growing rapidly.

Such are the discoveries made by our sister States of the South. Louisiana, unfortunately, is utilizing very little of her rich lands in raising these minor, but paying crops.

Storing Potatoes.

There are three methods of storing potatoes in general use, each of which has its merits and its champions. These are storing in barrels, bins, heaps or pits. The same general principles underlie these several methods, viz: Protection against frost and temperature, freedom from moisture and avoidance of heating caused by storing too deep. The advantages claimed for storing in barrels are that the roots are easily handled, do not suffer from abrasion, can be easily examined, and if diseased appear to be readily checked and removed. The chief objection to this method is the time and expense involved when the crop is a large one. Bins are coming largely into use, especially in localities near large cities, for the potatoes can at any time be readily reached and prepared for market. A cool, dry, well-ventilated cellar, with the light excluded, is an admirable place in which to store potatoes. The argument in favor of storing potatoes under ground is that there is little, if any, loss by evaporation. On the other hand, the labor involved in opening the banks when the roots are required, and the risk involved from the extremes of too close or insufficient covering. When pits are employed it is important that arrangement be made for ventilation. When stored in cellars, barns or root-houses it is a safe plan not to fill the bins with roots to a depth exceeding three or four feet. It has been claimed that lime sprinkled in barrels or bins at the rate, say, of one pound to each barrel, tends to prevent decay by acting as an absorbent and neutralizing the earthy odors. The importance of excluding light from potatoes and keeping them as cool as possible without freezing cannot be overestimated.

Dried Fruit.

The Chicago Grocer contains the following:

A few years ago the amount of dried fruit shipped from the South was scarcely worthy of note, but since then the business has reached very considerable proportions. The South has an almost undeveloped mine of wealth in the production of fruit, especially for canning and drying purposes. For the production of fruit, the climate is unsurpassed, and yet less fruit by far is consumed each year per family, whether in its fresh state or canned or dried, than in the North, where it is produced under far less favorable conditions. The States bordering the Ohio valley on the south, and including Arkansas, ought to become as noted for their fruit crops as the country bordering the Delaware and Chesapeake bays. Attention is being turned in this direction, and each year now sees a larger supply coming from the South to the northern markets, giving a good promise for the future in this line of production. Our first of the season's supply of small fruits in the Chicago market now comes from the Gulf States, the shipping points reaching north as the season advances, giving us berries, peaches and apples weeks before the crops of Southern Illinois—on which only a few years ago we mainly relied—are ready for market. But the business is yet only in its infancy, and the capabilities of the country in the way of production hardly tested. The demand for fruits in all forms is steadily increasing, and there is little danger of over-production if the products are put into a non-perishable condition by canning or drying.

In Mr. Riehl's letter "Notes on a Trip South" published in our issue of the 4th inst., the types made him say "I saw corn in wheat stubble looking well, and saw enough all through the South as far as I went to know it will do well if sown." Instead of corn read clover.

A small charge of dynamite will split the toughest roots into pieces that can be conveniently handled. Bore a hole nearly through the solid part of the root, insert the fuse in a cap and put it down to the bottom. The fuse burns at the rate of about a foot a minute, giving with a little calculation ample time for the operator to get out of the way.

The best results from wood ashes are secured by adding a small proportion of common salt. Ashes contain all the mineral elements of the plant, and they exert a good influence in unlocking fertility that would not be otherwise available. In burning anything the chlorine it contains is carried off with the smoke, and salt, chloride of sodium, supplies the deficiency.

Intelligent orchardists discovered the advantages many years ago of fertilizing the ground in apple orchards by top-dressing with yard or stable manure. We have seen old trees, partly dying and pronounced entirely superannuated, so far recovered by copious and broad top-dressing as to give again good and heavy crops. At a late meeting of the Dayton Horticultural society, Mr. Wayne stated that he had five bellflower trees remarkable for their unfruitfulness. He heavily manured four of them, and from these he had good crops. The fifth, which was not manured, bore next to nothing.

Experience is modifying the views of many potato growers who have heretofore favored cutting the seed very fine. Years ago one or two eyes in a hill invariably produced an abundance of sprouts, and a large crop of full-sized potatoes. More seed produced a large number of very small tubers unfit for marketing. Now so large a portion of the seed is defective that there are often not more than one or two eyes on a potato capable of making vigorous plants. Planting the whole potato is therefore coming in vogue, and unless great care is taken in selecting the potatoes there will be many missed or an outcome of poor hills.

ADVERTISEMENTS.

LINCOLN READS A POEM.

HONEST OLD ABE ENTERTAINS HIS CABINET WITH A LITTLE QUOTATION.

"Now, gentlemen, you all have more or less poetry in your souls; listen to this," and Abraham Lincoln, then President, rose from his chair, in his office in the White House, and read, in trembling tones, which indicated his heartfelt appreciation of the poem, Dr. J. W. Holmes' "Last Leaf," of which the following are two verses:

"They say that in his prime,
Ere the pruning knife of time
Cut him down;
Not a better man was found
By the criterion in his hand
Through the town."

Now the mossy marble rest
On lips that he had pressed
In their bloom;
And the names he loved to hear
Have been carved for many a year
On the tomb."

Mr. Michael Guilfoyle, of Birmingham, N. Y., is not so old as the venerable Boston citizen of whom the poet wrote, with such tender pathos, yet he is more than three score and ten. "For the past eight of those years," he writes, "I have been a perfect cripple from rheumatism, hobbling about the best I could with my cane. I took PARKER'S GINGER TONIC, and an unwelcome, strong as a gymnast, there is no trace of the disease left about me."

Mr. F. W. Mosher, wholesale druggist, of Brooklyn, writes Messrs. J. W. Holmes & Co., of New York, Proprietors of the Tonic, certifying to Mr. Guilfoyle's declaration. "Having all the properties of any preparation of ginger, PARKER'S GINGER TONIC is a remedy of infinitely greater range and power. It cures all diseases arising from an impure state of the blood or imperfect digestion. Dyspepsia (and all its consequences), Malarial Fevers, Sick Headache, Kidney troubles, Bronchitis, and common Coughs and Colds, various other ailments, and all the ailments of the stomach. Prices, 40 cents and \$1 a bottle. Larger size the cheaper."

A Terrible Cough Cured. "In 1857 I took a severe cold, which affected my lungs. I had a terrible cough, and passed night after night without sleep. The doctors gave me up. I tried AYER'S Cherry Pectoral, which relieved my lungs, induced sleep, and afforded me the most necessary for the recovery of my strength. By the continued use of the PECTORAL, a permanent cure was effected. I am now 62 years old, healthy, and am enabled to perform my duties as a physician. I can truly say that AYER'S Cherry Pectoral saved me. HORACE FAIRBROTHER."

Rockingham, Vt., July 15, 1882. "I have used AYER'S Cherry Pectoral in my family for several years, and do not hesitate to pronounce it the most effective remedy for coughs and colds we have ever used. A. J. CHASE."

Lake Crystal, Minn., March 13, 1882. "I suffered for eight years from Bronchitis, and after trying many remedies with no success, I was cured by the use of AYER'S Cherry Pectoral. I can truly say that it is a sovereign remedy for all such ailments. JOSEPH W. WILSON."

Byhalia, Miss., April 5, 1882. "No case of an affection of the throat or lungs ever cured by any other remedy, but by the use of AYER'S Cherry Pectoral, and it will always cure when the disease is not already beyond the control of medicine."

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MANUFACTURING CHEMISTS, PHILA.

Price, 50c per bottle; pint bottles, \$1.

A NOTED BUT UNTITLED WOMAN.

[From the Boston Globe.]



Messrs. Editors—The above is a good likeness of Mrs. Lydia E. Plinkham, of Lynn, Mass., who above all other human beings may be truthfully called the "Dear Friend of Woman," as none of her correspondents love to call her. She is seasonally devoted to her work, which is the outcome of a life's study, and is obliged to keep at her desk, to help her answer the large correspondence which daily pours in upon her, each bearing its special burden of suffering, or joy at release from it. Her Vegetable Compound is a medicine for good and not evil purposes. I have personally investigated it and am satisfied of the truth of this.

On account of its proven merits, it is recommended and prescribed by the best physicians in the country. One says: "It works like a charm and saves much pain. It will cure entirely the worst form of falling of the uterus, Leucorrhoea, irregular and painful menstruation, all ovarian troubles, inflammation and ulceration, Floodings, all Displacements and the consequent spinal weakness, and is especially adapted to the change of life."

It remedies every portion of the system, and gives new life and vigor. It removes faintness, flatulency, destroys all craving for stimulants, and relieves weakness of the stomach. It cures Bleeding, Headaches, Nervous Prostration, General Debility, Sleeplessness, Depression and Irritability. That feeling of bearing down, causing pain, weight and backache, is always permanently cured by its use. It will at all times, and under all circumstances, act in harmony with the law that governs the female system.

It costs only \$1 per bottle or six for \$5, and is sold by druggists. Any advice required as to special cases, and the names of the men who have been restored to perfect health by the use of the Vegetable Compound, can be obtained by addressing Mrs. P., with stamp for reply, at her home in Lynn, Mass.

For Kidney Complaint of either sex this compound is unsurpassed as abundant testimonials show. "Mrs. Plinkham's Liver Pills," says one writer, "are the best in the world for the cure of Constipation, Biliousness and Torpidity of the liver. Her Blood Purifier works wonders in its special line and bids fair to equal the Compound in its popularity."

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THE SOUTH AND SOUTHEAST.
FLORIDA.

SHOULD YOU CONTEMPLATE A TRIP to Nashville, Chattanooga, Atlanta, Charleston, S. C.; Savannah, Ga.; Jacksonville, Fla.; or in fact any point in the South or Southeast, it will be to your interest to examine the advantages over all other lines offered by the St. Louis, Iron Mountain & Southern Railway—"Iron Mountain Route"—in the way of Fast Time. Elegant Equipment, etc.

The Shepherd.

Foot-Rot in Sheep.

It is said that foot-rot, and other diseases to which sheep are subject, occur much less often among flocks which are pastured on rather rough ground, and particularly where they have to climb hills to get their grazing. In Scotland, the great country of Europe, the sheep are always found in greatest numbers among the mountain ranges. The famous Southdowns have also a rough country to pasture on, upon the steep, rugged chalk-hills of the south of England.

A Big Boom in Sheep.

The Texas Wool Grower is credited with saying that "one of the most significant features in connection with the sheep and wool industry in Texas is the fact that many of the 'cattle kings' in this commonwealth are investing in sheep on an extensive scale. These men have made fortunes in cattle, and realizing now that the cream of the profit in this line has been skimmed off, they are going into the sheep with the view of sharing the gains to be obtained in that line during the next five years." "Straws show which way the wind blows," and such signs as this indicate that a big boom in sheep is ahead." The Wool Grower expects to see ten pounds high grade merino ewes sell at \$10 per head, and that, too, before we are old enough to have great-grandchildren.

The Care of Sheep.

Hon. A. E. Kinney, at a meeting of the Plainsfield (Vt.) Agricultural Society, said he would recommend the following rules to be observed in the care of sheep:

1. With regard to management never starve a sheep, especially in summer.
2. Do not feed much grain if you have good hay, but at all events never let your sheep grow poor.
3. Many farmers lose by letting their sheep live as long in autumn without feed as possible; consequently if they are in good condition in October, and lose flesh and are made to gain again, there will be a tender place made in the wool.
4. Have your lambs come in March, if coarse wool; in May, if fine.
5. Shear your sheep, if possible, before May 20th.
6. Keep your sheep from cold storms at all times of the year, and be careful of them as of your horse. Many sheep perish from showers after shearing, even in July; so, I say, shear at a time of the year when they can be housed for a week after shearing; and in storms in autumn, if the sheep are exposed, it takes a long time to dry the wool, and the sheep are consequently uncomfortable for a long time; colds and consumption are the result.
7. Raise the standard of your flock; weigh every fleece at shearing; number the sheep and note the weight of the fleece, and then sell or kill your poorest sheep, as like produces like, and your average will soon go from four to seven pounds.

But little need be said about raising lambs; only take care of them and be sure especially to know whether the lamb is able to draw the milk. This is one great objection to have lambs come at the pasture, as they do not receive the attention they ought.

Much more might be said with regard to the general management in feeding, salting, curing disease, castrating and docking lambs, but I have said enough, and if any hints I have suggested will prove of use to my brother farmers, I feel that I shall be amply repaid.

[Rules 4 and 5 are, of course, susceptible to modification, according to climate.]

—ED. RURAL WORLD.

Cotton Seed Meal.

Mr. E. Sharp, a well-known sheep breeder and wool grower of Texas, writes the following valuable information to the Texas Wool Grower:

"My experience with cotton seed meal as a feed for sheep has been extremely satisfactory. I am most thoroughly convinced that it is not only the best, but decidedly the cheapest sheep feed that can be procured, when properly manipulated. My mode of feeding it is to cut hay or straw, moisten it with water, putting on the meal and mixing it thoroughly. The meal being very adhesive, each of hay, straw or whatever may be used, becomes thoroughly enveloped in a coating of the meal, and will be eaten with a relish by either sheep or cattle. For the purpose of thus preparing it, I have a mixing trough that will hold about 1,000 bushels. I fed my herd of 1,000 ewes last winter entirely upon this feed. I commenced the first of December by giving them (1,000 head) a bulk of cut hay equal to about forty bushels. Upon this I sprinkled 125 pounds of the cotton seed meal—or, two ounces to each sheep. This was their regular feed until the 25th of December, when I increased the meal to 150 pounds—equal to a little less than two and a half ounces per sheep. On the 20th of January I again increased it to 175 pounds, and on the 1st of February to 200 pounds. On the 1st of March I commenced decreasing until I quit feeding—March 20th. Hence the amount of meal fed to each sheep—breeding ewes—was:

Days.	oz.	lbs.	oz.
From Dec. 1 to Dec. 25	25	2	3 2
From Dec. 25 to Jan. 25	30	2 4-10	3 12
From Jan. 25 to Feb. 1	30	2 8-10	1 12
From Feb. 1 to March 1	28	3 3-10	5 10
From March 1 to March 20	20	2 1-2	3 2

Making the amount of meal fed each sheep..... 17 6
This was all my sheep were fed, except when the weather was such as not to increase the quantity of hay. When kept up all day, or several days at a time, I would, instead of forty bushels, give them 500 to 1,000 bushels of hay, thereby giving to each animal the same bulk of feed each day, whether out on the prairie grazing or kept under cover all day.

The result of this mode of feeding may be briefly stated as follows: Out of 1,000 head I lost, from the 1st of December to the 20th of March, two matured sheep, and on that day I had 95 per cent. of all

lambs born—no abortions, no premature births; mothers gave as much milk as the lambs required, and many of them more than the lamb could take; and today my lambs are the largest and my ewes the fattest—in fact, my flock is in the best condition I ever saw a flock of its size.

I put up my hay and corn, and can only approximate the cost. I bought my meal early in the season, at a reduced price, so that it just cost me \$20 a ton at my ranch. Hence, it cost me to winter my sheep just 17 6-10 cents per head for meal, and I think about 7 4-10 cents for hay, making a total cost of 25 cents per head; but, at \$24 per ton, it would increase the cost of wintering to 28 1-2 cents. Last winter a year ago I fed my sheep on corn, cotton seed, bran and hay, and it cost me about 63 cents per head, or two and one-half times as much as it did last winter; and yet they were not half as well fed.

I will take pleasure in explaining in detail several experiments I have made in feeding cotton seed meal dry, both to cattle and sheep, all of which satisfy me that, for producing milk, fat or forming flesh, cotton seed meal has no equal.

E. SHARP.

Meridian, Bosque Co., Texas.

Difference in Wools.

I feel somewhat like quarreling with the idea that so many have in supposing that a black gummy sheep is a sure indication of its fineness. The idea comes more forcibly to my mind in consequence of hearing so many at our late fair express their minds in that direction. One would suppose that a few ounces of the article that is sure to bring a discount when we sell our wool suddenly becomes valuable when looking at the sheep. Even awarding committees very generally are guilty of this weakness, and you are very sure of seeing the flutter of a red ribbon in their wake, lodged near the abiding place of the blackest sheep on the ground. I have taken some pains to ascertain some of the reasons why their preference is given in that direction, and almost invariably the reason given is that an oily, gummy buck is so much better to dress on the common ewes of the country. Others claim that after using a gummy buck and getting their sheep graded up to the proper standard, they intend to breed for longer wool. Far better would it be to try by breeding to retain every particle of length that is possible, and grade to the required fineness, than to breed back and be obliged to go over the very same ground twice. It is much easier to retrograde in quality of wool than to advance. Short wool and coarse wool are easily produced, in fact they produce themselves if we but slacken our diligence one particle; but to have many some fleeces will be objectionable, and we are constantly obliged to keep turning off and weeding out in order to keep our flocks up to the proper standard. This system of keeping inferior animals when good ones could be equally well kept, and of course with better profit, is very reprehensible; especially so when we remember the many facilities for getting good ewes, and rams. To possess a fair good stock of ewes and a ram of good dimensions and wool, and of no change breeding, is to have the first thing needed. But this in itself will not be sufficient if the necessary amount of forethought, energy and intelligence is not forthcoming, and it is often owing to the want of these latter qualifications that so many failures occur. It seems strange that a majority of farmers, after attending a fair and seeing first-class animals of the different breeds, can return home and again pursue the same old process of breeding without one thought of improvement put into successful practice. It seems that the old ruts in which our forefathers traveled have become so habitual to us that we are prone to follow on in the old way until some sudden jar produces an entire revolution in our plans and then we are so thoroughly Americanized that we cannot make a gradual change like our more phlegmatic neighbors across the water, but make a pell-mell dive with mayhap both our eyes shut, and no guarantee of a safe landing.—[Cor. Ohio Farmer.]

Information Wanted.

COL. N. J. COLMAN: I am much in need of information on a number of matters, and hope through the columns of your valuable paper to get it. I wrote to R. M. Bell last August for the same, but he never answered my letter.

1st.—When is the proper time to castrate lambs, and also old rams?
2d.—Is cotton seed good for sheep?
3d.—Is the grass of the Western prairies, commonly called sage grass, good hay for sheep?

4th.—What do you think of sulphur mixed with tobacco as a sheep dip?

5th.—What can I do for the scab at this time? It seems too cold to dip.

6th.—What is your opinion of shearing in this climate (same as the north line of Texas) once or twice a year?

7th.—Can you recommend Mr. Gentry's sheep as being pure blood merinos?

8th.—If I purchase a sheep from him, what is reasonable for the sheep, as he is to be shipped to me?

9th.—About what will 120 Southwestern muttons bring in your market, after getting fat on grass in the spring, say in May or June?

I am like a man I once knew in Texas. If all my sheep were to lay down and die, if I had the money and could find the sheep, I would invest again the next day.

I have some Arkansas sheep, but they don't stand hardship like the merinos. I am a subscriber for your much-prized and valuable paper, and expect to continue such as long as I grow stock.

Please give me the desired information in an early number, and oblige

J. J. S.

Oakland, Indian Territory.

ANSWER.—1st.—The best time to castrate lambs is when they are about a week old; rams may be castrated or corded (which is better) any time when the weather is favorable. Extremes of heat and cold are to be avoided. 2d.—Cotton seed meal is good for sheep; see article in this week's RURAL WORLD Sheep Department on that subject. 3d.—We doubt its being a good grass for sheep, but would like to hear from some of our correspondents on the plains on that question. 4th.—Used in proper proportions, it is probably a good combination. 5th.—Unless you have good shelter, you had better defer dipping until warmer weather; the proper time for dipping is immediately after shearing, when it should be persevered in until the

insect that produces the scab is entirely destroyed. No half-way measures will cure the sheep. 6th.—We prefer to have sheep breeders answer this question. 7th.—Mr. Gentry is entirely reliable, and any sheep that he recommends or sells as pure blood merinos will be surely such. 8th.—We believe that Mr. Gentry will not ask more than a fair and reasonable price, taking blood and quality into consideration, for his sheep. 9th.—That depends entirely on the supply and demand. Our market report will show from week to week the prices such stock commands at the stock yards.

THE WOOL MARKET.

Present and Prospective.

Under date of Boston, December 30th, we have the following report respecting the wool market:

The week and the year close with a better feeling in the wool market than has been noticed since the agitation of the tariff question began. The blunders of the commission have been thoroughly exposed and ventilated, and as they involve such gross perversion of the intent of the people, as well as of the commission itself, it is generally conceded that Congress will make the proper amendments. This faith has helped to restore confidence, though, until definite action is taken at Washington, the present uncertainty as to the schedule of duties finally to be adopted will continue to be a disturbing element. The decline in prices continues to attract buyers, and, considering that we are in the height of the holiday season, we regard the sales of two million three hundred and fifteen thousand pounds of domestic wool during the week as a hopeful indication and forerunner of an active demand in January. We do not ignore the fact that some conservative dealers and buyers look for a further decline, and freely predict a 37 to 38-cent market for fine Ohio, and 35-cent market for fine Michigan fleeces.

The judgment of some of these gentlemen is entirely to be respected, but in the present case we are obliged to differ from them. We believe prices have touched bottom, and in the absence of any unusual event, we expect to see our present quotations fully sustained hereafter. We are not predicting an advance, but we warn such buyers as are looking for further important concessions that they may be disappointed; and in their interest, as well as that of owners of wool, we hope they will be.

WEEK CLOSING JANUARY 6TH.

The new year opens with a better feeling in the wool market than has been noted for several months. We are not able to report any advance in prices, but they are less irregular under an improved demand. We repeat our views as stated by us last week, when we said, "We believe prices have touched bottom, and in the absence of any unusual event, we expect to see our present quotations fully sustained hereafter."

Sales reported by Advertiser: Domestic, 2,702,000 pounds; foreign, 40,000 pounds.

Sales reported by Journal: Domestic, 2,854,500 pounds; foreign, 40,000 pounds.

An analysis of the latter shows the sales to consist of 1,275,700 pounds of washed; 1,098,700 pounds of unwashed; 80,400 pounds of secured; 399,700 pounds of pulled and neps; 10,000 pounds of cape, and 30,000 pounds of carpet wool.

Foot Rot in Sheep.

An eminent English authority recommends the following treatment for foot rot in sheep: The earliest appearance of lameness should be followed by an immediate examination of the feet. All dirt, foreign bodies and detached horn should be carefully removed—carefully, so far as the latter is concerned, because, if I am of opinion there is entirely too much indiscriminate use of the knife practiced, diseased and sound horn alike being often randomly removed. Having pared away all detached horn, the exposed parts are to be dressed with a suitable agent. Those which have found most favor are: Sulphate of copper, nitrate of silver, creosote and tar. My own application, which I have always found to answer, is composed as follows: Nitric acid, compound tincture of Myrrh—of each one ounce; crude carbolic acid, one-half ounce; to be well mixed and applied with a syringe. Where the horn is soft and spongy and the discharge acid, Finlay Dun recommends as a useful dressing an ounce each of creosote, turpentine and linseed oil, and in the absence of the first two ingredients (creosote has similar action to carbolic acid) in the formula I have given it will be found exceedingly beneficial. The same authority further advises, when the interdigital skin becomes involved, the dusting of it daily with powdered oxide of zinc or sulphate of copper, or the gentle application of nitrate of silver, a line of treatment which I also fully agree. When the bones, tendons, ligaments and joints become involved, treatment applicable to these conditions must be adopted on surgical principles. In such cases, Fleming observes: "It may be necessary to remove the whole of the hoof; and where there is necrosis, caries and ulceration of the joints, which do not yield to any of the measures adopted, amputation of the affected phalanges may be resorted to, and with success when only one foot is involved. A valuable ram or ewe may in this way be saved, and its aptitude for breeding purposes be but little impaired. The end of the limb, after the amputation, is covered with a thick cicatrice of a horny nature, and it is only exceptionally that it meets the ground; the animal traveling short distances and grazing very well on three legs. Collateral treatment consists in avoiding, so far as possible, all conditions influencing the production or continuance of the disease. The affected animals should be removed to clean, dry ground. When practicable it is advisable after the dressing to place the patients in a building and on clean litter. In cases where there is extreme constitutional disturbance, salines and mineral tonics may be given with advantage; but, speaking generally, internal remedies are not required. After recovery and removal of the sheep, time should be plentifully strewn over the ground of the fold. In neglected cases, where the disease has become chronic and eventually recovery has taken place, anchylosis of the feet are often the result. In such instances it is better to prepare the animal as speedily as possible for the butcher."

The ignorant call him a heretic whom they cannot refute.—[Campanella]

The Pig Pen.

Raising Family Pork on a Small Farm.

For the benefit of "small" farmers who read the RURAL, I here give my method of raising pork for family use. In the first place, I have a tight floor in my barn, and when feeding my stock I shake the dust out of the hay as well as the seeds and clover leaves and blossoms, sweeping them all up once a day to prevent them being soiled by unclean boots when I am feeding the stock. When gathered I put them in a tub or pork half-barrel in the yard near the kitchen door, and as the cooking stove has fire in it all day now, I can always get a kettle of hot water to pour over the stuff, which is at once covered. I fed three pigs from October, 1881, till September 1, in the following way: I fill a pail with hay seed, leaves and clover blossoms; with this stuff I mix three pounds of wheat middlings three times a day for my three pigs, giving them a pailful of water each time, if there is no slop in the slop barrels. This feed will winter three pigs in good order, and if they get good slops from the house and have a warm pen to sleep in, they will generally be too fat for breeding purposes. In summer I let them run on grass, but they are fed the usual amount of middlings and have the customary quantity of water or slop to drink. In September I feed green sweet corn, and in October I give them shelled corn, and the middlings as usual. Here is my pig account for one year:

Dr.	
October 1, 1881, to 3 young pigs, at \$3.....	\$ 9 00
To 1 month's feeding wheat middlings, at \$1.25 per 100 pounds.....	29 70
Sweet corn in September.....	12 00
600 pounds of middlings in October.....	7 50
12 bushels of shelled corn, at 85c.....	10 20
Total.....	\$68 40
Cr.	
July 5, 1882, sold 4 pigs at \$2.50.....	\$10 00
September 20, sold 1 pig at.....	5 00
3 pigs to keep.....	15 00
At 85c 10, sold 675 pounds of pork, at 10c.....	67 50
Total.....	\$97 50
Net profit.....	\$29 10

Hereabouts the manure is the only pay allowed farmers for keeping hogs, and so far as the amount and quality of the manure are concerned, I get as good pay as any of my neighbors and the \$29 10 for the refuse from my barn. I had 1 separated my sows in time last spring I would probably have four more pigs to sell. As it was, they were dropped out of doors during a cold night, and as there were two sows on the place, the young things were found dead in the morning.

The Poultry Yard.

Periods of Incubation.

The period of incubation or time required in which birds sit on their eggs before the young are hatched varies in different species, as follows:

Humming bird, 12 days; canary bird, 14 to 18 days; pigeon, 14; common fowl, 20 to 22; turkey, 28 to 30; guinea fowl, 28 to 29; duck, 28 to 30; pea fowl, 25; goose, 25; swan, 40 to 45; parrot, 40. The authorities vary some as to the temperature necessary for the development of the young bird—some put it at 104 degrees, others at 140 degrees Fahr. The chick of the common fowl on the fourth day of incubation attains the length of about one-third of an inch; and then what appears to be voluntary motion is first observed. Ossification, or the process of forming bone, commences on the ninth day. Feathers appear on the fourteenth day, and if taken out of the shell the chick can open its mouth; and about the nineteenth day, the air-vessel at the large extremity of the egg is ruptured and breathing begins.

Try Poultry Raising on the Farm Again.

The ever genial and clever Phil. Thrift, too modest to use his own good name, thus discourses on this subject in the Western Rural:

The investigations regarding the cause and nature of chicken cholera, made by the Department of Agriculture at Washington, have not been without good results. From experiments made it has been found that the germs of this disease are taken into the body with the food and drink and seldom if ever with the air inspired; that the ground on which diseased fowls are kept becomes infected with the virus from the excrements of the fowls; also that a one-half per cent. solution of sulphuric acid will destroy the germs. These are not the only facts brought out by these investigations, but they are enough, if intelligently acted upon, to make poultry raising a much safer business than it has been of late years.

If their highest happiness is to "scratch," and it is thought best that they be indulged in this, turn them into the field, or even the vegetable or flower garden, where they can have fresh ground in which to amuse themselves; but never have them range and scratch and eat on the same ground.

The almost universal practice is to throw the food for poultry on the ground. In this way the fowls take up more or less dirt, and with it, if present, the germs of disease. As a preventive of the introduction or spread of the disease in this way, the fowls should always have their food and water supplied them from clean vessels. Even dry grain, as corn, or wheat, should be given them in small boxes or troughs, from which they can pick the feed but cannot tramp it with their soiled feet.

The other point of interest and to be remembered is that should the disease make its appearance it may be checked and finally banished by the use of sulphuric acid. The floor of the poultry house, after being cleaned, should be well showered with the solution from the rose of a watering can, and the yard, so far as practicable, treated in the same way. Sulphate of iron (copperas) is also a deadly poison to these germs, and is safer to handle than the sulphuric acid. One pint of dry copperas

dissolved in two gallons of water will be found strong enough, and I am not sure but a solution of less strength would answer as well.

It is remarkable that eggs should be selling at this time of the year, in Central Illinois, at thirty cents per dozen, and young chickens at thirty-five to forty-five cents each. Such prices indicate the scarcity of poultry and eggs, and this in turn shows to what an extent discouragement in this line of industry has reached.

With the better knowledge now had of this malady known as chicken cholera, there seems to be no reason why the rearing of poultry should not again become a profitable business, even at prices far below those above mentioned. Poultry products on the farm should be more abundant, and could be, without doubt, were the extra care in management above indicated more generally practiced.

Of the many thousands of poultry keepers in the country only a few have hens that lay in winter. If not a fault, it is at least a misfortune. Eggs are nice to have in cold weather either to sell or to keep, but especially to sell. There is no difficulty about it if you go at it right. Treat the hens decently, give them comfortable quarters, and feed them well and they will lay. If it should happen that under fair treatment they refuse to respond, they are a bad lot, and need to be suppressed and their places taken by a more appreciative set.

When turkeys are not two months old they can successfully withstand the severest weather if dry. In wet weather they should be confined in a yard under cover.

Fifty fowls will make, in their roosting house alone, from 7 cwt. to 10 cwt. per annum of dry manure and poultry manure is richer than guano in ammonia and fertilizing salts. No other stock will give an equal return in this way.

If you want the hens to attend strictly to business in the way of egg-production give them a chance. Wash their breakfasts, clean water, broken oyster shells, some sheep oats or wheat, some thick milk into which good bran is stirred, some cabbage or other green stuff, comfortable, home-like roosting and laying apartments, a square meal of whole corn in the evening—and then see if they are not industrious and diligent in business.

ADVERTISEMENTS.

No Whiskey!

BROWN'S IRON BITTERS is one of the very few tonic medicines that are not composed mostly of alcohol or whiskey, thus becoming a fruitful source of intemperance by promoting a desire for rum.

BROWN'S IRON BITTERS is guaranteed to be a non-intoxicating stimulant, and it will, in nearly every case, take the place of all liquor, and at the same time absolutely kill the desire for whiskey and other intoxicating beverages.

Rev. G. W. RICE, editor of the American Christian Review, says of Brown's Iron Bitters:

Cin., O., Nov. 16, 1881.
Gents:—The foolish wasting of vital force in business, pleasure, and vicious indulgence of our people, makes your preparation a necessity; and if applied, will save hundreds who resort to saloons for temporary recuperation.

BROWN'S IRON BITTERS has been thoroughly tested for dyspepsia, indigestion, biliousness, weakness, debility, overwork, rheumatism, neuralgia, consumption, liver complaints, kidney troubles, &c., and it never fails to render speedy and permanent relief.

The use for a short time of BROWN'S IRON BITTERS wonderfully changes and improves the personal appearance. It cleanses the scalp from all impurities, cures all humors, fever, and dryness, and thus prevents baldness. It stimulates the weakened glands, and enables them to push forward a new and vigorous growth. The effects of this article are not transient, like those of alcoholic preparations, but remain a long time, which makes its use a matter of economy.

Buckingham's Dye

FOR THE WHISKERS.

Will change the beard to a natural brown, or black, as desired. It produces a permanent color that will not wash away. Consisting of a single preparation, it is applied without trouble.

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PILES. This is very apt to be complicated with constipation. Kidney-Wort strengthens the weakened parts and quickly cures all kinds of Piles, when physicians and medicines have failed.
If you have either of these troubles, **USE** **KIDNEY-WORT**
PRICE 50c. USE DRUGGISTS SELL

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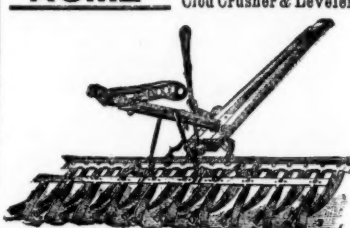
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Highly commended by scientific and practical Farmers, many of whom have purchased the most valuable recent improvement in Farm Machinery, while
All agree that "The judicious use of an implement like the "ACME" Pulverizing Harrow Clod Crusher and Leveler, in the preparation of the soil, before planting, will increase the yield from Five to Ten Dollars per Acre."

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The best harrow for preparing the soil for grass or other seeds.

The best harrow for covering seed.

The best harrow for cultivating winter wheat in the spring, adding largely to the yield.

The best harrow for cultivating young corn, sorghum or potatoes, and for destroying the weeds and does not tear out the plants.

The teeth being made of solid steel are slanting backwards, and thus never clogging, do not tear up corn, cane or potato plants, but destroys all light-rooted weeds.

Every farmer should have it. Send for illustrated circular to the manufacturer's southwestern agent, CHAS. E. PRUNTY, Dealer in Grain and Grass Seeds, No. 7 North Main St., St. Louis, Mo.

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Readers of the RURAL WORLD, writing to or calling upon, any one advertising in our columns, will do us a favor if they will say they saw the advertisement in this paper.

Premiums for Clubs.
In reply to inquiries whether we will offer premiums for large clubs we will say that we have concluded to open a premium list in which our friends can make such offers as they like in poultry, hogs, pigs, implements, machines, nursery stock, and such articles as we have been in the habit of offering in years past. Those wishing to aid in extending the circulation of the RURAL WORLD should send us letters stating what they will give. We will keep list standing, giving name and post-office of donor and the article offered. Our subscribers can now go to work getting up clubs with the assurance that every large club maker will get a fine premium.

RENEW! RENEW!
If you have forgotten the important matter of renewing your subscription attend to it at once. All names are stricken from our mailing list as they expire, and sometimes this causes the loss of the first numbers of the year when it may be found impossible to supply them.

This is the season to get subscribers. Everyone has more or less influence with his neighbors, and if he will try, he can send us one or more subscribers, for which we shall be very thankful.

Growers of Northern Sugar Cane, should see that they have the RURAL WORLD from the first issue of the year, so as to secure all the proceedings of the Mississippi Valley Cane Growers' Convention held in St. Louis.

MR. E. M. MONTGOMERY and J. S. Bell, of Clark county, Mo., have purchased a fine jack from Jasper Brooks, of Cape Girardeau county, Mo. His color is black, 14 1-2 hands high, good-sized body, bone and muscle.

CAPT. JAMES HARKNESS of this city, presented at our office last week a sample of the Japanese Persimmon from Oakland, California, raised in the garden of Mrs. Sell of that place, which measured seven and a half inches in diameter. If Judge Samuel Miller, of Bluffton, Mo., could have seen it, he would have gone into ecstasies. It bears no seed or we would have secured some for him. It weighed four ounces.

THOSE who contemplate attending the Mississippi Valley Horticultural Society Meeting, at New Orleans, on the 21st of February, and who will start from St. Louis on that trip, will do well to correspond with the editor of the RURAL WORLD, who will see to providing sleeping berths and making all necessary arrangements for their comfort. The railroad fare is \$15.00 for the round trip from St. Louis to New Orleans, with sleeping berths extra. Quite a party will go from St. Louis.

GOV. COLMAN is absent from the city attending the meeting of the Minnesota Cane Growers' Association, at Minneapolis this week. It was a long, tedious, cold journey to undertake, and required a good deal of urging on the part of his associates, to get him up to the starting point, as the telegraph reported deep snows, and the thermometer was down below zero, in the region he was about to visit. We hope that neither him or those who invited him, will regret that he made the journey. We have a large subscription list in Minnesota, and think it well to bring the editor and his readers together occasionally.

MR. E. D. RICHIEY, of Carlyle, Ark., was in the office this week returning from Ohio and Michigan looking after sheep and cattle to take into that growing State. He expressed himself a hundred times obliged to the RURAL WORLD for its horse, cattle and sheep departments. Through its advertising columns last spring he purchased a fine horse from an Illinois firm, for which he was offered double the money he paid for him before he reached home. He is now taking home a double-deck carload of sheep.

And thus is Arkansas improving and being improved. He has now an idea of getting a few Devon bull calves, say six to ten, to cross on the native cows of his locality, and is generally such a man as is likely to make things lively, settle where he may.

MRS. DAVIS' private hotel, centrally located at S. W. corner of Fifth and Locust streets, is the most popular and best managed hotel of its class in the West. The RURAL WORLD commends it to all its readers.

A DREADFUL CALAMITY.

At about 4 o'clock on the morning of Wednesday last, the Newhall House, Milwaukee, took fire on one of the upper stories and was very soon a mass of flames. In the house at the time were from 150 to 200 persons, about 70 of whom were employees, and at this writing it is understood eighty-two either perished in the flames or hurled themselves to destruction by jumping from the windows, which were in some instances six stories high.

Are we not right in designating it a dreadful calamity? Indeed it is horrible to think of. On a cold night in midwinter, with the thermometer at or below zero, 200 human beings enveloped in flames, and either burned to death or killed in trying to escape, or turned out, in a half nude state, to the icy streets.

And this same thing will occur again, not now perhaps, but sooner or later, for we are a nation of travellers, and when travelling, seldom stop to think of the dangers surrounding us.

But ought not some steps to be taken to provide against, and if possible prevent such catastrophes? Doubtless something will be talked about as a possible remedy all over the country, and every newspaper and nearly every reader will have its or his own scheme, as was the case after the Southern Hotel fire and loss of life in this city some years ago, but nothing ever came of them, and but for this more terrible calamity would have seldom been thought of or mentioned again.

We think every State in the Union ought to have some law by which the possibility of such a terrible loss of life might in the case of fire be provided against if not the probability of fire itself. We have inspectors of penitentiaries and prisons and of the State eleemosynary institutions, of boilers and of steamboats and ought also to have a commission of inspectors of public buildings such as hotels, theatres, churches, factories, etc., in which are gathered hundreds and sometimes thousands of persons all of whom may at any moment by a cry of fire become so panic-stricken as to be unable to reach the street without trampling each other to death by the dozen.

The expenses of such a commission could be readily taxed, in the way of license, on the owner of every building inspected, and no such building should be occupied until it had been inspected and licensed by the commission.

Many times within recent years have the scholars in the public schools of St. Louis been alarmed by the cry of fire, and though no accident of moment has occurred and no loss of property sustained it was more because the alarms were given in the daytime and the scholars and teachers drilled in their conduct and mode of exit on such occasions.

In a church, theatre, factory or public meeting no such drilling is possible, hence the necessity of ample provision of modes of egress, such as fire escapes, doors opening outward into wide halls and plenty of them.

If the Missouri legislature now in session fails to make provision in some way to prevent as far as possible a repetition of such a terrible catastrophe in this State, it will, in view of the facts now pressed upon their attention from Milwaukee be derelict in its duty to those who elected them to take just such care of their lives and property.

FARMERS' MEETING.

The State Board of Agriculture, assisted by eminent speakers invited for the occasion, will hold a Farmers' Institute Meeting at the court house, Nevada City, Mo., on Tuesday, Jan. 23d, commencing at 10 o'clock A. M., and extending through the afternoon and evening. Practical farm talks will be given by men of experience. It is to be a real working farmers' meeting for the discussion of practical farm topics. Dairying, stock-feeding, farm experiments, corn-growing, and topics of like daily interest, will be presented. Farmers attending the meeting are urged to bring out for show fine samples of produce or anything in the produce line of interest to the public. The ladies are especially invited to attend the evening meeting, when the subject of butter-making and gardening will be introduced. This is the second meeting of the kind held by the Board of Agriculture this season, and we hope the farmers of Vernon county will show their appreciation of its efforts by turning out en masse.

Fruit in Kansas.

COL. COLMAN:—The fruit crop the coming season will not be so remunerative as that of last year, the peaches are about all frozen with the cold spell we had in the early part of December. Sweet cherries, May Dukes, are all gone and the Richmond cannot be more than half a crop, while the English Morellos are injured but little and the Leib seems the hardest of all. It seems the change was too sudden. G. S. ESPENLAUB. Rosedale, Kas., Jan., 10th, 1883.

TIME TO REFORM.

EDITOR RURAL WORLD: The party in power seemed to get on to the wrong side of the resumption act; then again in the coinage of silver.

The State of Missouri, more than any other State, demanded the coinage of silver, and three-fourths is piled up in Washington, D. C., for want of brains to distribute it to 50,000,000 of people who are waiting to use it. Too much red tape in the Treasury Department, and the same department is under too much dictation from Eastern capitalists. The silver must be coined according to law. No restriction, and some way devised to distribute it where it is wanted in over three-fourths of all the counties west of Ohio to the Pacific.

Why could not postmasters in county seats distribute silver for currency and drafts on New York, as well as they could sell postage stamps?

Must we call for another Jay Cooke to assist the Treasury Department of this government?

The Agricultural Department and the Cabinet.

COLONEL COLMAN—I see in the RURAL WORLD of Dec. 28, about the middle of the third column, page 412, a brief article warmly favoring the elevation of the commissioner of agriculture to the position of a secretaryship in the cabinet. I have long desired such a step, because the most important industry, underlying and supporting all other departments, deserves such a recognition of its dignity, and because the agricultural interests of the country could be materially advanced. The last reason no longer has any weight. The reports of the department are not, as formerly, published for farmers, but for scientists. Even college graduates, a few years from school, find it difficult to understand these reports, and to the mass of farmers they are not even Greek—they are simply "gibberish." Please don't "elevate" the department to anything. It is too elevated already for practical results. The report for 1880 was put in my hands some days ago by Capt. H. B. Richards, the department correspondent for this county, and a thorough, go-ahead farmer and an enthusiastic sorghum raiser. I have not only read it—I have studied it. I venture the assertion, without fear of successful contradiction, that of the 300,000 copies of this 672 page volume not ten copies will fall into the hands of farmers who will read them, or understand them. Leaving out the last fifty pages of reading matter and the report of the statistician, the volume is comparatively worthless to the class it is supposed to have been designed to benefit. It would be valuable for a text book for an advanced class in college, or as a book of reference for a finished scientist who had kept up his studies; but, with the exceptions noted above, all the information conveyed to planters in its hundreds of pages could easily be given in one-tenth the space, and could then be understood and used. If the commissioner must be made the secretary, call him the secretary of scientific entomology, or scientific veterinary surgery, or scientific anything, but don't mislead by using the word agriculture on omitting the word scientific.

HARRY CASSID. La Grange, Tex., Jan. 8, 1883.

No Secondary Place.

COL. COLMAN:—The first number of the RURAL WORLD in its new dress for '83 is at hand. A thousand thanks for this beautiful New Year's present to your readers. We receive this as an earnest that your valuable paper is not to occupy a secondary place among the agricultural journals of our country.

E. R. SHANKLAND. Dubuque, Iowa.

REMARKS.—Thanks for your compliment. We have received so many of a similar character as to assure us our new dress is welcomed by all. The RURAL WORLD shall indeed occupy no second place but take the lead at least in the Mississippi Valley; but it will ever be as purely an agricultural paper.

An Explanation.

In the issue of the RURAL WORLD of Dec. 28th appeared a letter from H. C. Jacobs, of Albany, Texas, making a charge against one O. Rust, a manufacturer of well-augers. The following letter is Mr. Rust's explanation:

COL. COLMAN.—In September, 1881, Messrs. Berry & Fleming, bankers at Cisco, Texas, sent me a certificate of deposit by Henry C. Jacobs for \$285, and also an order for a well-drilling machine. I forwarded the machine to Berry & Fleming as per order, and they sent me the money in October, 1881. After that, Mr. Jacobs wrote me that he had ordered the machine for other parties, and wanted a commission of 20 per cent., amounting to \$57. I did not pay it and he sent the matter to a collecting agent here. It was returned unpaid. This is the only transaction ever had with Mr. Jacobs.

Respectfully, O. RUST.

Wants an Incubator.

A subscriber writing from Springfield, Mo., wants to know where he can get an incubator with instructions how to use it, and how to manage the chicks after hatching. Who can give him the information?

ANOTHER.

Please give plain directions in the RURAL WORLD, for making a chicken incubator, like the one used by Mrs. Carr. Brunswick, Mo. Wm. K.

Coming Meetings.

January 20th.—Kansas Cane Growers' Association, annual meeting, Topeka. About January 20th.
January 25th.—Annual meeting of the Indiana State Board of Agriculture, Indianapolis.
January 30th.—Annual meeting Indiana Cattle Breeders' Association, Indianapolis.
January 30th to February 3d.—Agricultural Institute, Illinois Industrial University, Champaign, Ills.
January 31st.—Annual meeting of the Indiana Swine Breeders' Association and of the Indiana Wool Growers' Association, Indianapolis.

February 10th.—Annual meeting of the New York State Sugar Cane Association, Geneva, N. Y. C. J. Reynolds, Secretary, Corning, New York.
February 13th-15th.—Wisconsin State Cane Growers' Association, Madison.
February 14th.—Seventeenth annual convention Northwestern Dairymen's Association, Mantoka, Minn.
February 21st.—Mississippi Valley Horticultural Society's annual meeting, New Orleans. S. M. Tracy, Secretary, Columbia, Mo.

The Cattle Yard.

The use of Thoroughbred Cattle.

Readers of Agricultural and Stock papers are doubtless at a loss at times, to see how it is possible for those who purchase highly bred stock, and pay the enormous prices at which they are sold, to make of it a paying business; but there is no enigma about it, nor any doubt as to its being legitimate or successful. In order to get a clear understanding of the matter, we have to separate the business of breeding for breeders, and breeding for the butcher. He who breeds for breeders has in view the preservation of the blood of the stock he is breeding in its purity, that the qualities which distinguish it from all others, and particularly from native stock, may be preserved in its integrity. This he does because of the well known axiom that, like produces like, and he can be sure that in coupling his thoroughbreds, the produce will be like unto the sire and dam, or both, and partake of their characteristics.

The beef breeds of thoroughbred cattle are used in this country, only to reproduce their own kind, whilst in Great Britain, they have been used as dairy stock during their breeding years as well.

The milk breeds of cattle are utilized here, hence our best butter and cheese come from the highest and best bred herds of Jerseys, Holsteins and Ayrshires. But be they what they may, beef or milk, thoroughbred cattle are kept and bred to reproduce their own kind, and their produce is expected to be equal in value to their sire, or dam at the proper age.

The utility of this course is seen, when we cross them upon inferior breeds, animals that have not been carefully handled and bred for centuries, and had all their good points brought to perfection by judicious and scientific coupling, but have on the contrary been allowed to roam at their own sweet wills, and to get their own living, exposed to all the rigors of the elements, winter and summer. When we take a thoroughbred sire, and stand him at the head of a herd of such cows we find that his get at three years old, will outweigh pure natives of four years of age, three or four hundred pounds, and that the flesh is so far superior that it will bring from two to four cents per pound more in the stock yards.

A pure bred Jersey bull, or an Ayrshire or Holstein, added to a dairy herd, will nearly double the value of the heifers gotten by him, and the butter or cheese will be of a superior quality, and hence bring a higher price in the market.

The breeder therefore produces bulls, who in turn produce steers for beef, or he produces heifers to be utilized in reproducing their own kind. The farmer buying his bulls can afford to pay a high price for an animal who shall add three to four hundred pounds to his steers, steers that will be ready for the butcher at least a year before the scrub would, and bring a higher price per pound besides.

During the ensuing Spring and Summer, many sales of thoroughbred stock will be advertised in the RURAL WORLD, and we counsel readers who have not already provided themselves to be on the lookout for one or more good animals.

It needs not that we point to the ease with which we can produce grass and hay, and corn, or the present value of beef, and butter and cheese, to show that the rearing of stock is cheaply and easily done, much, very much more so than the cereal crops. The stock men everywhere are getting rich fast, whilst the farmer, at farming proper, has as much as he can do to make both ends meet after a year of the hardest kind of toil.

The Shorthorn.

The Shorthorn has never excelled as a beef producing animal. We do not mean by this that he has never been beaten in the show ring or at the shambles, nor are we to be understood as saying that no other carcass ever sold for more per pound off the butchers block. We mean that take him all in all as a beef producing animal, adapted to the use of the farmer in every degree of latitude where cattle of any kind can be bred and utilized no other breed has yet been produced that has excelled the shorthorn. This is better exemplified by the fact that in the English speaking world he is more generally found than any other, and the further fact that no breed of animals known to the farmer or fancier has ever approached him in the matter of price. In the islands of Great Britain, in Australia, Canada and the United States he outnumbers all other breeds put together and can show ten to one of any other.

This discrimination and very general popularity is perhaps the most striking proof of his value and general usefulness.

and may be taken as demonstrable evidence of the point we make that as a beef animal bred for profit by the farmer he is unexcelled.

The Hereford has his merits, and they are neither few nor small; so has the Devon and the hornless Aberdeen and Angus; but they are neither of them comparable with the Shorthorns let their friends say what they may. They are hardy and thrifty and can be inured to hardship and to wrestle for and get their own living. They are born and brought up on the pasture, and though like all growing, flesh-forming animals will thrive better on much than on little, and on that which is good better than on that which is not so good, still if occasion requires they will live on the same as our natives and put on twenty to forty per cent. more flesh in the same time and make much better meat.

They are, moreover, regular breeders bringing a calf every year, and have milk enough to raise them. The males are of the character called impressive, that is, able to communicate their own qualities to their offspring thus raising from the native dam calves that will almost equal themselves in weight at the same age.

Where then is the necessity for doing what many would advise us, run after other breeds of really less value and for which in the craze for something new they would have us pay three or four times as much money. Let us stick to the Shorthorn.

Public Sale of Shorthorns.

The sale of Shorthorn cattle to be made by H. D. Ayres at the Fair Grounds, Marshall, Saline county, Mo., on the 21st February ought to attract the attention of buyers for hundreds of miles around. Mr. Ayres is no novice at the business of breeding, having been engaged in it many years in Bourbon county, Kentucky, he removed to this State some five years ago and has followed it ever since.

The males to which his cows have been bred are not only of the choicest families but the best specimens of those families. The 14th Duke of Thorndale, one of the number, when last sold brought the handsome price of fourteen thousand nine hundred dollars, a price almost unprecedented, and his get have been universally esteemed. The other bulls mentioned in the advertisement though not of the same high character are nevertheless first class and their produce will be looked for with considerable anxiety. His cows and heifers will therefore not only be of good families, but highly bred and justly prized; but what is highly commendable on Mr. Ayres' part and gives us all the more pleasure in making reference to his sale is the fact that all his stock have been bred and inured to hardiness, like the experienced breeder he is, he appreciates the fact that his stock is to go into the hands of the farmer or who will expect from them the same service and subject them to the same treatment as his native cows. They have not been stabled and blanketed and fed for exhibition, but kept in the open field and bred for utility rather than show. Of the ninety-seven head to be sold, twenty-seven will be young bulls of various ages, thus offering one of the best opportunities our Missouri and western farmers will have this year to get what they want near at home, thoroughly acclimated and without the trouble and expense of going five hundred miles for it. We speak whereof we know both of the honorable character of the man and the excellence of his cattle. Write H. D. Ayres, Arrowrock, Mo., for catalogue.

A Good Bargain.

Some weeks since we announced that K. H. Allan, of O'Fallon, St. Charles Co., Mo., had sold his farm and purchased a much larger one in Boone county, Mo., and was willing, nay, desirous of selling his herd of Shorthorn cattle, thirty in number, at private sale in lots to suit purchasers. As he is to remove to his new farm on the 1st of March, he will sell at a bargain rather than take them with him. The animals are well bred, the females old enough are all regular breeders and the young things all the picture of health and thrift. This is a rare opportunity for those who want a few head to get them cheaply and a splendid chance for some one to get a small herd entire at a very low price. The cattle may be seen on the farm or he may be addressed as above.

Great Milking Short-Horn Cows.

Stirred up at length by the constant reports of the large yields of milk of Holstein cows, and of butter of the Jerseys and Jerseys, the breeders of Short-horns are just beginning to tell what their cows are capable of doing in the dairy line, and we hope they will continue this exhibition for the benefit of the country. Formerly the Short-horns were universally bred for a combination of great milk yields, and when dried off and fattened, for making quickly and cheaply an excellent carcass, of beef. But latterly, among perhaps a majority of their breeders, their beef points have been more generally cultivated than those of the dairy, the former being more brottable than the latter in the Western States where they are much more extensively bred than in the Eastern.

In the Breeders' Gazette, we find recently reported the milking of a Short-horn cow belonging to J. F. Jones, of Clark Co., Ky. On March 16th her owner began weighing her milk with the following results:

Month	Days	Pounds.
March	15	576
April	30	1,236 1/2
May	31	1,296 3/4
June	30	1,353
July	31	1,216
August	31	1,208 3/4
September	30	1,219
October	31	880 1/2
November	15	392
In 244 days		10,068

Her greatest yield in any one day was 63 1-4 pounds. "For the first month this cow was fed on hay and grass, after which she was turned on grass with the rest of the herd, having no grain whatever."

Considering the above feed for the cow, we think her milking extraordinary, as it must be recollected that the cows of other breeds, whose great records of milk are

given, have been stimulated during the trial with all the best food for the production of milk, which they could digest. This is a great extra advantage to them, for we know as a general rule, that the way a cow is fed adds largely to or diminishes the quantity of milk she will give. Hereafter we will report some better products of Short-horn cows approaching those of the best of the Channel Island breeds.—[Rural New Yorker.]

The Horseman.

Belle Chief, owned by C. D. Colman of St. Louis, will drop a foal by Monitor in May. She is a large, rangy, bay mare by Clark Chief, son of Mambrino Chief, who with only a short period in the stud sired such good ones as Croxie 2:19.4; Woodford Chief 2:22.1-4; Blanche Amory 2:26, and four others in the 2:30 list. He was also the sire of the dam of Wilson 2:21.1-4, and the sire of Stocking Chief, who got Humboldt 2:20, and all his get were remarkably gifted with speed. For the number of his get, he produced a larger proportion of fast trotters than any other son of the great Mambrino Chief.

A Good Jack Wanted.

COL. COLMAN—Where can I buy me a good jack at a fair price? A. J. C. Ottumwa, Iowa.

ANSWER: Address Capt. Charles E. Leonard, Bell Air, Cooper Co., Mo. See his advertisement in our breeders' directory. He is both an honorable and a responsible man, and entitled to your fullest confidence.

Box Stalls for Horses.

A writer in the National Live Stock Journal expatiates eloquently and truthfully upon the virtues of box stalls. He says:

But the greatest blessing, because it brings to the horse the greatest number of benefits, is the capacious box stall. In densely crowded cities, where land is exceedingly valuable, the box may be impracticable. But in very many cities even this comfort could be introduced with pecuniary profit. Private stables should never be built without a box stall, if for no further use than hospital purposes; and public stables, even when the ground is valuable, should be provided with these great blessings. If the stall is not larger than ten feet long and eight feet wide, the horse can move around freely in it; and rest very frequently consists as much in changing position as in unconsciousness. When he is tired, or leg weary, or foot-sore, he can lie down at full length and enjoy the indescribable luxury of stretching out all four limbs to their utmost capacity. Then he can eat his food from the ground without any danger of the seeds flying into his eyes, or of dragging the hay under his feet, or making it unfit for anything else than bedding. Then he can secure free ventilation without being exposed to drafts either at the head or rear of the stall. Then, in sickness, he has a commodious chamber, and in health place where he can take an abundance of natural exercise, which is so necessary for his general health, as well as the general preservation of his muscles and feet. The horse is a much more restless animal than man. If penal punishment consisted in tying up the guilty man, by the head, in a narrow confinement, for twenty-four hours without intermission, it would be denounced as unnecessary cruelty; and yet horses are thus universally treated with no apparent consciousness of the cruelty thereby practiced. In the box stall all this is avoided. The horse eats naturally, lies down and sleeps naturally, and roams about to take his necessary exercise naturally. The only objection, that has ever been urged against the box stall, aside from its expense, is, the complaint that the horse is liable to rub his tail against the sides of the stalls, just high enough up to prevent his rubbing the dock of the tail. This is an effectual remedy where the horse is restive and mischievous enough to form this bad habit; but, frequently, the rubbing is a direct reproach to the laziness of the groom. If the tail, from the dock to the floating ends of the hairs, is kept clean by washing and judicious brushing, no irritation annoys the horse, and no rubbing against the side of the stall may be feared, as a general rule. Comfort, cleanliness, prolonged usefulness, and continued health and soundness, therefore, plead for the general introduction of box stalls for horses. In the stable economy of the near future they may become universally popular.

Colt Training.

In California, some of the noted breeders of trotters who have startled the Eastern breeders by the wonderful performances of their youngsters, make miniature tracks and work their colts on them even before weaning them. How this is done is told by Mr. O. A. Hickok, a noted trainer and driver, who spends much of his time in California, to a Spirit of the Times reporter, in an interview, as follows:

The principal miniature track is about a twelfth of a mile in circumference. It is enclosed by a board fence, with the posts set on the outside. I noticed that there was a top guard of iron piping or railing, carried above the board fencing, as if some unruly colt had attempted to fly the track, and of course the railing could be dispensed with, by boarding higher. The track itself is about six feet wide, and is made close up to the outside fence. The inside is bounded by the usual railing of a trotting course, only a little higher. The track is link-shaped, as customary, for an approved mile course, two comparatively long stretches, with the turns well thrown up toward the outside, and there is a slight grading from outside on the straights, sufficient to prevent the rain from settling on it. The track-bed is dug out and leveled, it is covered with a coating of manure and tan-bark, over which is spread fine loam, deep enough to make the footing firm, while the sub-soil is kept springy by the

manure, etc., and so the work neither jars nor strains the colt.

How many colts are turned in at a time, and how are they kept in motion?

There is but one colt exercised at a time, and two men are stationed inside of the track, one near each turn, whose duty it is to keep the colt moving, for he will naturally slacken up a little on the turns after he becomes accustomed to the track.

When does this mode of training begin, and how are the colts made to understand what is required of them?

I believe some are put in just before weaning them, and weanlings are worked regularly, perhaps not daily like older colts, but yet often enough to inculcate the idea of their lessons. They are handled and gentled at this time, and as yearlings are broken to harness; but their free work is continued on the miniature track as well. Some colts, when first turned in, will jog off quietly, and go around the track as fast as they can on a trot, rarely breaking. Others, high-spirited, wild fellows, will frantically, and playfully, jump and plunge; but they are soon quieted by soothing words, and gently urged to move around the ring.

When such a one has had his play out, he will come down to a trot, and the aim of the men standing at each end is, by voice and cracking of whip, to keep him moving without rattling him. When he breaks into a run, of course the urging ceases, and some encouraging word is used to have him settle to his trot again.

How long a time, daily, is the colt given such training, and how many tracks of this kind have they on the ranch?

If my memory serves me there are two tracks besides the chief one I have described. It is the only one provided with a small stand in the center of the enclosure, furnished with revolving chairs for the accommodation of the Governor and his guests. As to the duration of the exercise, it varies according to the age of the colt, and the strength he exhibits. It is increased with his age, and changed as circumstances demand. No fixed rule can be laid down in such cases. Sometimes they are merely kept in long enough to show a good gait. No profuse sweating or over-tiring of their powers is allowed.

After the training in harness on the mile track is commenced, is the colt ever turned loose again on the preparatory course?

Oh! yes; I have seen two and three year olds turned in, and they showed a stroke as steady and carriage as perfect as if in harness, to the great admiration of the visitors. I think such change has a good effect, and is capital medicine for a colt who becomes track-sick, or needs only jogging for a time, as the free exercise can be given, fast or slow, according to the inclination of the man inside the enclosure.

Please state fully your opinion of the utility of the miniature course as a factor in colt training.

I think it offers special advantages; its first use gives them the trotting motion and speed. I saw a Hinda Rose, when but a year old, trot a 2-40 gait along the straight sides. I notice the colts trot faster of their own accord on the stretch-les. In addition to the earlier commencement such tracks afford, there is not much danger of overwork. A colt is very much different from a matured horse in making speed; its muscles, joints and tendons are tender. I always govern the work of my colt by the way he feels and acts. If you get a colt tired, he is apt to fall into bad habits of gait and behavior, and becoming sore in consequence, he will then show no trot. But an aged horse, with a formed gait and fixed habits, is different; he will warm to his work, even if he is a little sore. Many old trotters require considerable opening brushes, at any rate. I find when a colt comes out and makes a good trot, he speeds right off, acting as if he took pleasure in it.

From your remarks I learn that track work for colts has its abuses as well as its uses, but that there is not so much danger in over-working the youngsters on the miniature course, and the speed they acquire on it is utilized in their future development in harness.

Quite so, although the cases of Eva and Sweetheart may be cited with much force, by those who do not think this new departure will create a revolution in the system of colt training, as to trot, as neither of them were trained in this way, and you know they are first-class trotters, of their ages.

Don't you think that such a track could be made available by Eastern breeders?

Why, yes. I think any stock farm proprietor might make three or four small tracks of different lengths, housing the whole enclosure of the smallest one, and simply putting a projecting roof over the track itself of the larger ones. If he happened to have in training a few aged trotters, he would have an opportunity of giving them work in stormy weather, or at other times when necessary.

Horse Notes.

Mr. Peter R. Parsell of Jerseyville, Jersey Co., Ill., has just bought of S. W. Parlin, Boston, a promising, standard bred, Lambert stallion, which he proposes naming Boston Lambert. He is a large, rangy, stylish colt of a dark bay color, with black points and star, bred by J. A. Sawyer, Esq., of Allston, Mass., foaled May 1, 1877, got by Jubilee Lambert, he by Daniel Lambert; dam, Gentiana, by old Goldsmith, granddam by Tecumseh, sire of the trotter Pat Hunt, whose record to wagon is 2:25. Tecumseh is also sire of Capt. Walker, which got the dam of the noted trotting stallion Black Cloud, record 2:17 1/2. Jubilee Lambert has a faster record (2:25) than any other entire son of Daniel Lambert. He is a horse of good substance, very strongly built and now owned jointly by Mr. W. H. Wilson of Cynthiana, Ky., and Mr. Otto Felton who are using him for stock purposes. His dam was the Harvey mare by the Tait Horse, a sire of Vermont Black Hawk. Gentiana has a public record of 2:35, won when carrying Boston Lambert, and has trotted a full mile on a sandy track in 2:27. She has also trotted halves at Beacon Park in 1:10 and once trotted fifteen consecutive miles over that track, without urging, in a fraction less than forty-four minutes, averaging a mile in 2:52 1/4, and trotting the thirteen mile in 2:34 1/2. She is a mare of wonderful courage and endurance, and thought by good judges to have no superior in New England as a road mare. She was bred the past season to Almont Eagle, full brother to Piedmont, 2:17 1/4. Boston Lambert is a horse of fine style and excellent trotting action, is powerfully muscled, has great substance and weighed with a light blanket and halter, the morning of the

sale, 1182 1-2 pounds, although only in fair flesh. When a yearling he was taken to Phillips, Franklin Co., Me., where he was kept until last September; then brought to Boston. He has left excellent stock around Phillips, his colts being uniformly large and stylish, with capital trotting action. He is a wonderful well-bred colt, being standard under the rules of both the National Horse Breeders' Association and those of the Kentucky Breeders. Mr. Parsell, his present owner, is an extensive breeder of fine stock, including gentlemen's road horses, Shorthorn cattle and Poland China swine, has followed breeding thirty-five years, and now owns the gray stallion Plato, record 2:31 1-4, by Gen. Knox, dam the Allen Horse, he by Hunt Horse, he by Bush Messenger, he by Winthrop Messenger, son of imported Messenger. Mr. P. has also a Hambletonian stallion and an interest in Ben Patchen, sire of Burlington, which got the noted trotting stallion France's Alexander (2:19). He has a brood mare which has dropped seventeen living foals, and is now in foal again. During the past twenty years Mr. Parsell has exhibited his horses and other stock in the ring at St. Louis (Mo.) Fair, where he has competed successfully with the breeders of Kentucky, as well as those of Missouri and Illinois, never failing to secure a share of the prizes for which his animals were entered. It is a high compliment to New England for such representative breeders as Gen. Withers and Mr. Parsell to select animals from this section for crossing with their own superior stock, and it is also a significant fact that both selected representatives of the Black Hawk branch of the Morgan family.

THIS AND THAT.

The people of India talk to each other in 132 languages.

Dr. HOLMAN'S PAD AND PLASTERS will do more for a Sickly Spinal Column and Paralysis than all the known applications combined. NEURALGIA never fails to yield unto a permanent cure with the use of Dr. HOLMAN'S PAD AND PLASTERS.

An artesian well of Lillers has been in constant flow ever since 1120.

Butte, Montana, lights up the path of civilization with electricity.

The Howe Scales have all the latest improvements. It is true economy to get the best. Borden, Select & Co., Agents, St. Louis.

Since Dickens's death, twelve years ago, 4,239,000 volumes of his works have been sold in England alone.

The slave traffic still continues on the east coast of Africa. It has been broken up on the west coast.

For Throat Diseases and Coughs, Brown's Bronchial Troches, like all other really good things, are frequently imitated. The genuine are sold only in boxes.

The number of liquor saloons in Maine increased from 830 in 1881 to 918 in 1882, according to a census bulletin.

Wm. Beckett, Fairfax, Mo., says: "Two bottles of Brown's Iron Bitters cured me of theague."

A bull-fight in Tucson, Arizona, on a recent Sabbath, was attended by the band of the United States Sixth Cavalry.

Mr. Muhill, the great English statistician, estimates that the wealth of the United States amounts to \$49,770,000,000. "When my horses were sick with what was called lung fever, last Spring, I gave Simmons Liver Regulator (liquid) in one ounce doses, twice a day. They all recovered speedily."

E. T. MICHENER, "Prop'r Michener's Express, Kenton, Pa."

The profits for handling baggage at Castle Garden, N. Y., in 1883 were \$20,000, and a former Superintendent says they ought to reach \$40,000 now.

Sheridan's Cavalry Condition Powders will positively prevent all ordinary diseases common to horses, cattle, sheep, hogs, and fowl, besides constantly improving them. Beware of the large packs, they are worthless.

An octogenarian at Simmons Gap, Ga., is living with his ninth wife. He is the father of 53 children, and at a recent family gathering over 300 of his descendants were present.

Ayer's Hair Vigor improves the beauty of the hair and promotes its growth. It imparts an attractive appearance, a delightful and lasting perfume. While it stimulates the roots, cleanses the scalp, and adds elegance to luxuriance, its effects are enduring; and thus it proves itself to be the best and cheapest article for toilet use.

A telegram from Trautman, Bohemia, says that fifty Spiritualists residing there have been summoned before the magistrate. The complaint is that mental derangements result from their practices.

DELEWAN, Wis., Sept. 24, 1878.

"GENTLY I have taken one bottle of the Hop Bitters. I was a feeble old man of 78 when I got it. To-day I am as active and feel as well as I did at 30. I see a great many that need such a medicine."

D. BOYCE. Ezekiel Webster, brother of Daniel Webster, was the first person who proposed the purchase of a hearse for the town of Boscawen, and was the first one carried to the grave in it.

"No eye like the master's eye." Had Esop lived in our day he might well have added, "No popular curative like Kidney Wort." All eyes are beginning to turn to it for relief from diseases of the liver, bowels and kidneys. Kidney Wort is nature's remedy for them all. Those that cannot prepare the dry can now procure it in liquid form of any druggist.

Early marriages are becoming less common in Ireland. The census returns show that of more than a million and a half of marriageable men on the census, over 900,000 were either bachelors or widowers.

A man in any station can do his duty, and, doing it, can earn his own respect.

If you are a woman and want both health and beauty, remember that all superficial efforts to increase your personal charms are vain. Freshness and beauty accompany health, and to secure this Mrs. Lydia E. Pinkham's remedies for all female weaknesses offer the surest means of renovation. The highest intelligence loses its lustre when it must find expression through a bilious complexion. Good for either sex.



Percheron Stallion "GILDINO" (No. 2003, P. N. S. B.)
One of nearly 1,000 imported from France by M. W. DUNHAM, Wayne
Du Page County, Illinois.

A clergyman who changed his faith from that of one sect to another so frequently as to excite comment declared that he had seven good reasons therefor—"a wife and six children."

To Consumptives.

"Golden Medical Discovery" is a concentrated, potent, alternative, or blood-cleansing remedy, that will golden opinions from all who use it for any humor, from the common pimple, blotch, or eruption, to the formidable scrofulous swelling or ulcer. Internal fever, soreness and ulceration, yield to its benign influences. Consumption, which is but a scrofulous affection of the lungs, may, in its early stages, be cured by a free use of this God-given remedy. See article on consumption and its treatment in Part III of the World's Dispensary Dime Series of pamphlets, costs two stamps, post-paid. Address World's Dispensary Medical Association, Buffalo, N. Y.

A man at Ramway, N. J., tried to domesticate a blue heron. He lost one eye, several pinches of flesh, a part of his trousers, and his bird, for in the struggle for mastery he was obliged to shoot and kill his pet.

Organs for Only \$43.00.

The special offer made in this paper by Daniel F. Beatty, the world-renowned organ and piano man, places a first-class organ within the reach of all. An advantage in ordering of him lies in the fact that the house is of long standing perfectly reliable and Mr. Beatty will do exactly as he promises; and he promises to take back the organ, after one year's use, if not perfectly satisfactory, and refund all money paid him, with interest from the day on which it is sent.

A brave and faithful guardian of our homes and property rescued from imminent peril.

A VERY popular and well-known member of our police force, who has performed duty twelve years at the Union R.R. Depot, on Exchange Place, in Providence, R. I., gives his unsolicited testimony. Hear him:

"I have been dreadfully troubled with disease of the kidneys and liver during the past six months; at times I was so severely afflicted that I was unable to stand on my feet, as my feet and legs grew weak, and in a sad condition every way when I longed to get out of bed, and my blood was in a wretched state, and it had become so impoverished and circulated so poorly that my hands and feet would be cold and numb and so white as to appear lifeless. I could not rest nights, but was so distressed all over that I could lie still in bed, but would keep turning and rolling from one side to the other all night, so that I would feel more tired and exhausted in the morning than when I went to bed. My condition became so serious that I was obliged to stop work, and for thirty days I was unable to be on duty. 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The Dairy.

Care of Cows.

ED. RURAL WORLD: I have a neighbor who was indicted before the Grand Jury for cruelty to animals, for letting five of his cattle die for want of water while he had several wells on his place. Another old settler with ample resources and plenty of land has not \$25 worth of buildings for housing stock on his farm. Even his fresh cows and young calves enjoy the luxury of the snow and mud for a bed and the heavens for a cover. Results: The first man sold his cows at auction for \$5, and upwards, while the other man occasionally buys butter for his own use.

Many a man feels satisfied with the excuse that he is not able to build a barn. I am just that unfortunate myself, yet I have 37 head of cattle all under cover nights, out of the wind, dry places to lie on and all fed in mangers. With straw, slough hay or even weeds, of which any farmer usually has plenty (especially of the latter), I construct cheap, yet comfortable sheds and have my young cattle all graded and divided up into seven different lots, so that the strong will not abuse the weak.

They soon learn their places and give evidence that they appreciate and yield ample remuneration for this little attention. I could not sleep well on a feather bed while my stock lie out at the mercy of the weather, nor enjoy a clear conscience with my cattle enduring a miserable existence even if there was any profit in it. I would not keep a cow if I could not have her in a dry shed or stable. The greatest convenience in this line is what we call the "drop" in the stable floor. This consists of the floor just behind the cow being six inches lower than where she stands. This offset keeps all the manure and filth from coming in contact with the cows and gives clean milking. The greatest failing which cattle have is the propensity to "push with the horns," and although it is a little cruel, the only remedy is to put them into stanchions. For this purpose a cow needs only three feet of room in width and five feet of room for the platform on which she stands. For small cows a little less room even will do.

O. MOFFET.

Butter Cows.

There are many farmers who have extra good butter-cows and do not know it. They have poor pastures in summer and no shelter and indifferent food in winter. In the house they have no convenience for making butter; the milk is set where there are no arrangements for keeping it cool in summer, and in the living room exposed to the odors of the kitchen in winter; and neither the quantity nor quality are any index of what a cow could do.

Inexperienced and careless milkers often ruin, at least for the season, the best milch cows, and sometimes the evil becomes permanent.

Rennet.

The detriment which cheese suffers from unskillfully prepared rennet is the most crying evil which now militates against the cheese interest, both of Canada and the States. The injury done by acidity, which has been regarded as such an important factor in factory cheese making, is bad enough, but that error has reached its maximum and is now rapidly declining, and is in a fair way to disappear, or dwindle into insignificance. So small a quantity of acid is now employed in comparison with what was formerly used, as to greatly reduce the mischief wrought by it. Badly prepared rennet is doing more mischief by far. But few factories are exempt from it. Those which have clean and sweet rennet, which will in no way warp the flavor of the cheese made with it, are the exceptions. Badly prepared rennet is the rule. It is either tainted with putrefactive decay, or sour with whey which is stale or stinking, or both. Whatever direction in which it is off, the cheese suffers, and the instances in which it is off are so frequent as to constitute the greatest obstacle in the way of advancement and better profits.

There is not the least need of any of the losses and damage done to cheese in this direction. It is just as easy to prepare rennet that will be sweet and clean and effectual in coagulating milk and curing and preserving cheese, as it is to debase and destroy it in the way it is now done. The readers of the *Advocate* will find in the September number for 1879 a safe method of preparing rennet in hot weather, written out in detail, but it is better to prepare rennet in the winter in quantities sufficient to last through the following summer, than to prepare it by piecemeals when wanted. The strength of rennets is most readily and effectively separated from the skins by soaking and rubbing, or pounding them in a pickle made by putting a pint of salt into a twelve quart pail of water, soaking and pounding till the strength is all out. To preserve the pickle for summer, after the soaking is done, salt with a little more salt than it will dissolve, and keep the brine in a cool place, stirring it occasionally, or what is better, put it up in jugs or bottles, and if the rennets used are not tainted to begin with, it will keep safely and always be ready for use.—*Farmers Advocate*.

Bitter Milk.

My Jersey grade heifer calved April at the age of two years, and has done well throughout the season. Where she ran in pasture there was a quantity of Roman wormwood. Since coming to the barn her feed has been English hay and one quart of corn meal per day, with once in a while a little salt, and a few raw potatoes and some pumpkins. For a few days past her milk has been very bitter, so that it tastes badly even in cooking. She will calve the first of April. One of my neighbors says he had a cow that gave bitter milk for about two months before calving, every year. Cannot there be something done for it?

ANSWER.—It is not probable that the effects of the Roman wormwood, even if there were any of a deleterious character at first, would continue to the present time. After calving, the good results of such a course will be apparent in the milk, cream and butter yield.

cases, as bicarbonate of soda, or the common cooking soda, or saleratus, as it is sometimes called in commerce. Give of this one tablespoonful, daily, in four quarts of scalded bran, ten days, or till the milk resumes its natural taste and condition. Till then, the milk should not be used in the family, but had better be given to the pigs or chickens.—[*Mirror and Farmer*.]

New York Dairyman's Association.

This association met at Cortland, N. Y., on the 19th Dec., and is reported in brief by the *Chautauque Farmer*. We present a few paragraphs:

OLEOMARGARINE VS. BUTTER.

Mr. F. B. Turber, of New York, was introduced, and presented a paper upon "The Influence of Oleomargarine in the Production and Price of Butter." The following is the substance of the address: Not until the farmers and merchants began to co-operate did any attempt to secure legislation to prohibit the sale of oleomargarine as butter succeed. To show the amount of oleomargarine manufactured he read the following statistics:

In 1881 under the Mege patent 13,072,399 lbs. were made in the States of Maryland, Massachusetts, Connecticut, Kentucky, Louisiana, Ohio and New York; the latter State manufacturing the greatest amount, viz: 4,446,063 lbs.

Aside from the manufacturers by the Mege patent was manufactured about 4,000,000 lbs. making a total of 17,000,000 lbs. of artificial butter. Comparing this with the amount of butter manufactured it appeared that two pounds of oleomargarine are made, to every 100 pounds of butter.

The effect of the manufacture of oleomargarine has been to better the quality of butter, because people prefer to eat pure oleomargarine than rancid butter. In Europe there has been a similar effect.

As "eternal vigilance is the price of liberty," and as "cleanliness is next to godliness," so vigilance and cleanliness in the manufacture of dairy products are the main elements of success.

In reply to questions Mr. Turber stated that Corning Manufacturing Company use from sixteen to twenty per cent. of genuine butter in the manufacture of oleomargarine.

There is a patent upon the process of extracting the oleomargarine oil, but with the oil any one can manufacture the butter.

Soiling.

Mr. F. S. Peer, of East Palmyra, was introduced and spoke upon "Soiling." Mr. Peer is the author of a very fine little work upon the same subject. He said: There are seven advantages of soiling, viz:

1. A saving of land.
2. A saving of fence.
3. A saving of food.
4. A better condition of stock.
5. Greater production of beef, milk and butter.
6. An increased quantity and quality of manure.

Against these there are urged only two disadvantages, viz:

1. Requires additional labor.
2. The stock is deprived of the freedom of running about the fields.

He proceeded to explain that one acre of soiled land is equal to four acres of pasture land. Upon his own farm he had tripled the amount of stock.

Dairying as a Business.

Dr. Sturdevant read an address upon "Dairying," from which the following brief abstract is made:

"The great curse of business is that we have to compete with bankrupt firms, that is, there are many firms doing business without knowing what their business is costing them, and thus are maintaining themselves for a time on capital while selling below cost. The same fact is true in dairying. There are times when prices become depressed below profitable production, yet despite the fact that milk is being produced at a loss, there are plenty of farmers who are willing to sell it for the prices purchasers are willing to give."

Dairymen should be interested in extending the knowledge of their business and in educating their associates.

Dairying interests begin with the cow, and here dairymen divide in their opinions.

Some prefer the native cow, and others the so-called fancy stock. But there is a great difference in cows. Chemical analysis shows that in dairies some cows are kept with evident loss. Dairymen should give such careful attention to their herds that they can eliminate such cows.

The fact is true that the breed is more important than the feed. Milk is manufactured. The milk is made from the tissues of the cow and by her own functions, and is not food strained through her. The sources of the milk supplying each test are wholly separate, and the milk often differs materially in composition. Evidence shows that the milk producing power is inherited and may be changed or increased by breeding.

The amount of cream does not indicate the value of a cow for butter. Sometimes cows with little cream surpass in butter a cow producing more cream. The amount of cream differs in the same cow. I had a cow which averaged day after day from ten to twelve per cent. of cream. One day she produced 60 per cent. of cream. One experiment showed a difference of from 24 to 42 per cent. of cream in different tests at the same milking. So far as I know there is no way of determining the butter quality of milk except by the churn.

No one can do your business as well as you can yourself. You yourself must study your cows. You must know the value of each cow as tested by the churn. Business like farming necessitates great care, forethought and attention."

DAIRY NOTES.

The curry-comb or a good stout brush made of broom-straw will be found a valuable assistant in promoting the milk flow at this season of the year if well and regularly used.

CARE OF COWS.—Do not dry them off too quickly. Five to six weeks previous to the time of calving will be soon enough. Do not diminish the feed, as some do, but keep the cows in first-rate order. After calving, the good results of such a course will be apparent in the milk, cream and butter yield.

HAY OR CORN FODDER FOR COWS.—Ex-Governor Boutwell of Massachusetts has been experimenting on the value of corn fodder for cows in milk as compared with good hay, and reports that in his first experiment the corn fodder is ahead. The quantity of fodder and of hay was equal, and the other items of food were unchanged, yet twenty-three cows lost fourteen pounds of milk after being kept on hay for four days, and resuming corn fodder, there was a gain in five days of twenty-three pounds. The fodder was cut up the ground as soon as the ears were a little loosened, put up in stacks to cure, then cut into small pieces and treated to hot water twelve hours in nearly air-tight boxes along with cob-meal. Mr. Boutwell puts the comparative cost to each cow per day at twenty-one cents for hay and a little over sixteen cents for the corn fodder. It is to be doubted whether the hay fed in this experiment was as good as it should be. At any rate, it is hard to believe that the best hay is not worth more than corn-stalks. More light is wanted.

The West has three distinct methods of dairying, which are each extensively practiced—the whole milk plan of cheese-making; the factory creamery, which makes butter and utilizes the skim milk for soft, white cheese; and the cream-gathering system, that takes the cream and leaves the skim milk at home for the pigs and calves. Each of these systems were on "deck," and to the best of their ability the friends of each defended their different ways. The price of butter even "out West," say 36 to 53 cents per pound, has had the effect of stimulating butter production, and that section seems alive to its manufacture. To talk with the exhibitors one would think that the West was all going into the creamery business in the spring. The idea has been that the cream-gathering system was a pioneer method to introduce dairying, and when the latter was established the factory system would crowd it out because butter and cheese were more profitable. But this idea is losing ground, for the high price of beef and pork makes the skim milk more valuable as food for stock than for cheese. The transportation problem also comes in out there; to convert the cream into butter and the balance of the milk into pork, condenses it to a point that reduces the cost of getting this milk to market to the lowest point, and puts the cheese question at once to rest.

Referring to the different styles of butter, the *American Dairymen* states as follows: Factory is butter picked up here and there at different farms, or brought to the store to be exchanged for goods. It is graded and selected according to quality, and so packed and sent to market under the title of "factory or imitation creamery." Miller is another name for factory butter, and is made as follows: Butter of the same quality, but of any color or character is thrown into a mill, where it is ground up and made of uniform color, and packed in tubs and sent to market, looking very much like a poor grade of genuine creamery. Creamery butter proper is made at a creamery, a common depot where farmers deliver their milk, or gathered cream is collected. When the milk is gathered it is allowed to stand until the cream rises, when it is skimmed off, butter made of the cream, and the skim milk turned to use either by being made into cheese or fed to animals. A creamery or butter factory cannot be run profitably unless the milk of several hundred cows can be obtained, so it is hardly proper to call butter creamery unless a number of dairymen contribute milk to its make. Butter is often made at cheese factories, when it goes to market under the name of creamery, though in that instance it would be a borrowed name.

The business of education is to teach the rising generation how to think, not what to think.

PROMPT AND POINTED. There is nothing sometimes like hitting the nail on the head. A lady telegraphs to her husband: "The children are sick with colds. What shall I do?" The answer came promptly: "Go to the nearest drug store and buy the greatest Blood Purifier, and give it to them." For colds and coughs, this is no equal. Give it a fair trial.

We should strive to be happy, and make others happy around us; for happiness is the chief aim of all."

ADVERTISEMENTS.

HOP BITTERS ARE THE PUREST AND BEST BITTERS EVER MADE.

They are compounded from Hops, Malt, Buchu, Mandrake and Dandelion,—the oldest, best, food most valuable medicines in the world, and contain all the best and most curative properties of all other remedies, being the greatest Blood Purifier, Liver and Kidney, and Life and Health Restoring Agent on earth. No disease or ill health can possibly long resist their action. They are used, so varied and perfect are their operations. They give new life and vigor to the aged and infirm. To all whose employments cause irregularity of the bowels, or urinary, or who require an Appetizer, Tonic and mild Stimulant, Hop Bitters are invaluable, being the greatest Blood Purifier, Liver and Kidney, and Life and Health Restoring Agent on earth. No disease or ill health can possibly long resist their action. They are used, so varied and perfect are their operations. They give new life and vigor to the aged and infirm. 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